STRATEGIC JOINT STAFF FORCE POSTURE AND READINESS PROCESS ANALYSIS

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Executive Summary

1. The purpose of this report is to examine the process used by the Strategic Joint Staff to determine the Force Posture and Readiness (FP&R) of the Canadian Armed Forces. The *CDS Directive for CAF Force Posture and Readiness 2013* identifies a need "to better direct, quantify, measure, and manage the Readiness of the CAF". The goal is to "refocus discussions of CAF Readiness away from what has been generally a qualitative depiction and focusing dialogue on a quantitative approach that deliberately measures output and better represents issues described as Force Posture and Readiness" The scope of this task included a review of the business requirements, the existing process, an examination of the current FP&R data collection application, and a review to determine if the Strategic Analysis Support Tool (SAST) system or other DND information systems should provide data to FP&R.

2. Currently, SJS staff work with L1 staff to produce a Force Posture and Readiness status report on a semi-annual basis and the results are documented in a Microsoft Excel application called the FP&R Collection Tool. The Collection Tool lists all the CFDS Missions, Tasks, and Commitment Details, and related information such as the Endurance required (surge and/or sustained), and the Readiness State required. Each L1 updates their own worksheet to document the Readiness and Commitment Status of their Force Generational Capabilities (FGC) against the CFDS Missions and Tasks for each year in Horizon One. Included in the evaluations are Limitations, Restraints, and L1 Commanders' Comments for each FGC and also for the overall L1 Force Generator. The L1 worksheets also are "rolled up" to the Executive Summary worksheet and there is also a roll-up of all Force Generator statuses for the CAF as a whole. The final result is a status of all FGCs and Force Generators against all CFDS Missions and Tasks, with Limitations, Restraints and L1 Commanders' notes documented.

3. The analysis did not reveal any noteworthy issues with the process being used, but the major issue was the lack of quantitative data with which CAF Posture and Readiness were being measured. The process involved the active participation of the L1 staffs, but there were no quantitative metrics provided relating to the FGCs' capabilities. L1 staffs provided qualitative statements regarding issues with specific capabilities, but there are no data to support the analysis and conclusions. For comparison purposes, the Capability Based Planning (CBP) process was reviewed with SJS and DCSAS staff and not unexpectantly there were several common themes, although the processes were different. FP&R is concerned with all Missions and Tasks in the current and next three years, whereas CBP considers many scenarios, but not all Missions and Tasks, and conducts analysis for 15 years or more in the future. CBP appeared to have a significantly more extensive process and used data from DND source information systems provided by the Strategic Analysis Support System (SAST). Accordingly, it is recommended that SJS work with DCSAS to consider using the CBP process.

4. The FP&R Collection Tool functions satisfactorily for the qualitative data that is being reported, but it has limited capability for quantitative data analysis. SJS staff have recognized that quantitative data is required for several reasons, not the least of which is that the *CDS Directive for CAF FP&R* requires quantitative metrics. An alternative to the FP&R Collection Tool would be an application based on a relational database such as Microsoft Access. A database could be created that links the Missions and Tasks and their related data to the Force Generators and Force Generational Capabilities for subsequent assessment. A database also has several advantages over spreadsheets

including easier data maintenance, it can manage higher volumes of data, and can produce complex reports more easily.

5. In order to develop quantitative capability metrics, SJS requires access to DND source system data on personnel, equipment, supplies, ammunition, and infrastructure. However, currently SJS does have access to DND source system data such as DRMIS or HRMS within the FP&R process. Discussions have been held with DCSAS regarding using data from the SAST and this action should continue in a structured way to develop quantitative metrics using SAST data. SAST has HRMS and DRMIS financial data and it also has significant analysis and reporting capability that could be helpful to FP&R, but it does not have DRMIS non-financial data or infrastructure data. To access this equipment, supply, and ammunition data from DRMIS and infrastructure data, SJS will require access to the source systems and will need to liaise with Defence Business Management (DBM) to obtain the appropriate data.

6. It is very important to note that good quantitative metrics will require considerable analysis and time to develop for several reasons. Firstly, the outcomes to be measured need to be defined that reflect the appropriate goal. If equipment capability is to be measured, which equipment should be measured, what equipment should be measured, how should the measure be interpreted, and what standard of metric should be used? Second, what data is representative of the metric and can the data be extracted? If the data does not exist, is there an alternative metric or can the source system be modified to provide the data? In addition, as these questions are addressed, circumstances will change and the development process will have to adjust. Finally, the opinion has been expressed that Readiness will always be judgement call and that quantitative metrics can only be used to support assessments. Certainly this will be the case in the near term, but appropriate quantitative metrics can be of value and should be pursued.

7. Overall, SJS has developed a good process for providing a reasonable qualitative evaluation of CAF Force Posture and Readiness. However, the current process is approaching its limits, but there are definitely opportunities to expand the capability. The SAST system and the CDB process provide some near term opportunities that should be investigated and may provide some significant enhancements with a reasonable effort.

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Introduction

8. According to the Statement of Work and as discussed with the two principals directing this activity Dr. Ben Taylor of Strategic Planning Operations Research and LCol Patrick Falardeau of the Strategic Joint Staff, the primary focus of this report is to analyse the current FP&R data collection process, the data being used in FP&R and in the SAST system, and to recommend the way ahead for FP&R. This report did not examine the FP&R overall process or the analysis processes employed by SJS staff.

9. All of the references listed below were reviewed, although many are only background to the analysis that was conducted and will not be referred to in this document.

References:

A. CDS Directive for CAF Force Posture and Readiness 2013, letter 28 June 2013.

B. CAF Force Employment Priorities and Performance Measures - Annex A to CDS Directive for CAF Force Posture and Readiness 2013, letter 28 June 2013.

C. FP&R Task Table - Annex B to CDS Directive for CAF Force Posture and Readiness 2013, (unclassified version) Excel updated 31 March 2013.

D. Glossary – Force Posture and Readiness – DRAFT, 22 January 2014.

E. The Canadian Armed Forces Force Posture and Readiness 2014, Director of Staff Strategic Joint Staff, Brief to DMC, PowerPoint, 22 Jan 2014.

F. The Canadian Armed Forces Force Posture and Readiness, Directorate Strategic Readiness Strategic Joint Staff, PowerPoint, Oct 2013.

G. FP&R Production, PowerPoint, 26 November 2013

H. Global Logistics Readiness Dashboard Overview, United States Department of Defense Joint Chiefs of Staff, Strategy and Readiness Division – Joint Staff Logistics Directorate, PowerPoint, undated

I. Canadian Defence Priorities, CF Force Posture and Strategic Readiness, DRDC CORA Technical Memorandum 2012-289, December 2012.

J. Defence Business Management (DBM) Concept of Operations (CONOPS), DRAFT undated.

Analysis

10. The goal of this task is to assess the FP&R process to determine if the existing process is suitable, if additional data should be used, including data from the SAST system, and what changes to processes and data would be appropriate. Since it was explicitly noted that quantitative data would be required, one focus in the analysis was on the FP&R application and the data within. The process was also reviewed and compared to the CBP process and data which are very comparable. There was a major focus on data, but the focus in this area was to understand the requirement in order that a general design could be recommended. There was insufficient time for detailed consideration of data sources, quantitative metrics, and other detailed data issues.

Force Posture and Readiness Application and Data

11. In support of the CAF Force Posture and Readiness mandate of the Strategic Joint Staff, an Excel application was developed internally by SJS staff with contractor technical support. This Excel application was created specifically to collect and consolidate L1 posture and readiness information. For clarity, the Workbook is referred to as the FP&R Collection Tool.

Force Posture and Readiness Collection Tool

12. The FP&R Collection Tool is an Excel application that includes the following worksheets:

12.1. Notes. This worksheet lists the “Level 1 Commanders' Comments” and the “CFDS Mission and Task Statements”

12.2. View 1 – Executive Summary. This worksheet outlines the current readiness of all CFDS Missions and Tasks for each year in Horizon One summarized for each L1 and also summarized for all L1s contributing to each Mission and Task.

12.3. View 3 – Force Generator Capabilities Commitment Status. There is a separate worksheet for each L1 which outline the Posture for all Force Generational Capabilities identified for each L1 for each year in Horizon One.

12.4. Raw Data. This worksheet records all the raw data that is entered by the L1 staff when they update their Commitment Status. The Raw Data, as the name suggests, is the source of the data in View 1 and View 3 worksheets.

13. The data from the FP&R Collection Tool, except for the Raw Data, is listed in Annex A to this report.

Analysis of FP&R Collection Tool Data

14. The data used in the Collection Tool is properly maintained because there are measures in place to protect the Raw Data, it automatically rolls up the View 3 Capabilities data to the parent View 1 Force Generator data, and there are validation checks to ensure the data is consistent throughout the Worksheet. While the Raw Data is a basic database and should retain database integrity, it has limited capabilities. In addition, there is a need to expand the data collected to include more quantitative data which would be more difficult using Excel. Outlined below are observations regarding issues with the current FP&R data:

14.1. Quantitative Data. The *CDS FP&R Directive* requires performance measures be expanded to more effectively link outputs to major resource areas (personnel, equipment, ammunition, sustainment parts and supplies, and infrastructure), but there is no quantitative data within the FP&R Collection Tool. SJS staff have recognized that quantitative data is ultimately required to conform to the *CDS FP&R Directive*. They also recognize that quantitative data will determine more accurately and in more detail the posture and readiness of CAF capabilities. Outlined below is an example of quantitative data, its advantages and some issues:

14.1.1. Sustainment Parts and Supplies. Supplies in support of equipment and personnel preparing and/or participating in CFDS commitments are essential for all operations. Based on engineering assessments, maintenance and supply usage history, planned and possible operations, budgets, and other factors, maintenance and logistics staffs are constantly managing the inventory of thousands of supply items to support current operations and to be prepared for the next contingency. Supporting large fleets of new and old equipment systems used across Canada and to be prepared to go almost anywhere in the world is a challenging activity and often difficult with budget limitations and a long procurement process. Spares are held in supporting supply accounts in the DRMIS system and the inventory accounts use minimum stock levels that automatically trigger replenishment when the actual holdings drop below the minimum levels. In response to replenishment recommendations, logistics staff may redistributed inventory from other locations, hasten repair or procurement of an item, or initiate new repair or procurement. Managing the minimum stock levels is just one of many logistics activities, but it could be used as a measure for Sustainment Parts and Supplies readiness

14.1.2. For Sustainment Parts and Supplies readiness purposes, a quantitative metric could be the percentage of items held by a Force Element that have the minimum level or more of stock in the inventory accounts. To assess the readiness, “GREEN” could be that 95% of spare parts have the minimum or more inventory held, between 85% and 95% could be considered “YELLOW”, and less than 85% could be “RED”. However, there are other considerations and issues with this metric. For example, should there be one standard for all FGCs or should a separate standard be set for each FGC? Should all supply inventory be considered or only spares used for certain equipment? Should inventory in support units or elsewhere in the Supply System also be considered? If supply inventory includes many non-essential spares, should a lower standard be used or could the important spares be identified in some way in DRMIS so that only the essential spares are measured? Also, if this metric is to be used for readiness measurement, those who have access to change the minimum stock levels in DRMIS will be changing the readiness metrics. As a final comment, there should be at least several measures for each readiness area, for example a metric related to spares within the repair process and possibly the level of spares in the entire supply system.

14.1.3. Quantitative metrics are better than qualitative measures because they are objective, but they need to be chosen carefully. If they are reasonable and well understood, they can quickly tell senior management of the current readiness status and they can also lead to quick corrective action. For example, is there are insufficient spares at one location, action can be taken to redistribute spares from other locations or to procure the needed additional spares. Once the quantitative metrics are decided, a big advantage is the data may be extracted and reported relatively quickly. Quantitative metrics can also be tracked over time to see progress or the reverse. The impact of budget cut-backs can be seen more quickly and budget cut-backs could also be directed to areas that would do not impact readiness.

14.2. The *CDS FP&R Directive* also directed linkages be created between FP&R and the Program Activity Architecture (PAA) and SJS staff have begun to identify the links separate from this project. Other DND information systems that could provide data to FP&R are Defence Resource Management Information System (DRMIS-SAP), the Human Resources Management System (HRMS-PeopleSoft), the Regular and Reserve Force pay systems, and others.

14.3. FP&R Collection Tool Data Structure. While the Raw Data in this application retains data integrity, it has limited capability. The FP&R Collection Tool uses a single cell in the View 3 worksheets to represent several simultaneous attributes of the Force Generational Capabilities. This single cell must record one or more Commanders' Note Identifiers, while also noting if the FCG is Executing, Contributing, or Dedicated, and if the cell has changed since the last update. There are similar difficulties with the View 3 Commitment Status cell and the View 1 cells. This has been accomplished in this application, but it is difficult to interpret by those not familiar with the conventions used.

14.4. In a relational database such as Access, database entities can be created, linked together, and given attributes that are validated and easier to maintain. A database can also provide reports, facilitate queries, and data entry by users can be enabled using forms, all more easily than Excel. From an analysis of the existing FP&R data, the following observations are provided:

14.4.1. Conceptually there are three main entities in the FP&R Collection Tool, but in this application there are no clear delineation between the entities. In general terms, the three entities are the CFDS requirements, the L1 capabilities, and the assessments of the capabilities against the requirements. In the Collection Tool they are all displayed in a linear fashion as is normal in a spreadsheet application. This display can cause confusion such as for Endurance: Does the Sustained or Surge check reflect the requirement or the assessment? Also, if there is an impact on this requirement, it will only be reflected in the L1 Commander's Notes and it would not be readily visible. The following paragraphs will discuss the FP&R Collection Tool in further detail.

14.4.2. CFDS Missions, Tasks, and Commitment Details. These are three related entities that together define the CFDS Force Posture and Readiness requirements against which the Force Generational Capabilities are assessed. However, in the FP&R Collection Tool there are inconsistencies such as Tasks with multiple Task Statements and single Task Statements with multiple Commitment Details. It was also noted that the data in the Response field was never completed, and the Endurance and Readiness State were not used for Common Capabilities Related to All Missions.

14.4.3. Force Generational Capabilities (FGC), Force Elements, and Department Identification Numbers (Dept Ids).

14.4.3.1. FGCs are the capabilities generated for the L1 Force Generators and are the entities against which the L1s report the Commitment Status, Limitations, and Restraints.

14.4.3.2. The FGCs are comprised of one or more Force Elements and often portions of Force Elements. The FP&R Collection Tool does not explicitly record Force Elements, but Force Elements were discussed as the organizations that execute or are prepared to execute CFDS Missions and Tasks.

14.4.3.3. Dept Ids are the numerical representations of DND organizations used in the various information system including HRMS, DRMIS, and PAA. As such, all DND

activity such as procurement, establishment and movement of personnel, and management of equipment and supplies are linked to Dept Ids. There were no detailed discussions regarding the structure and relationships of Dept Ids, except to indicate they are the organizational entity in the main DND information systems and also that the Dept Ids are sometimes sub-divided to represent smaller organizations in some DND information systems.

14.4.3.4. In the case of the Army and the Military Police Force Generators, it appears they are in fact using Department Ids for FGCs, so there is confusion regarding how FGCs should be defined and represented. Force Elements may linked to one or more FGCs and assessments must consider how to evaluate concurrent multiple commitments. Force Elements will need to be incorporated into the future FP&R system in order to use quantitative data and they would also be a primary reporting point.

14.4.4. Force Posture and Readiness. The third entity provided by FP&R Collection Tool is the resulting Force Posture and Readiness for each FGC as assessed against the CFDS Missions, Tasks and Commitment Detail requirements for each year in Horizon One. In the current FP&R Collection Tool, the assessments possible are Contributing, Executing, Dedicated, and Not Contributing. If contributing in any way, a Limitation and/or Restraint may be identified by L1s and other comments may be entered if desired by the L1. FP&R has several related views, the first being the Commitment Status of an FGC against a Commitment Detail as shown in a Capability Cell below the FGC. The second view is the In-Year Assessment of all the FGCs against a specific Commitment Detail, which is also the Force Generator Assessment against the Commitment Detail as show on the View 1 Executive Summary. The final view is the overall Assessment of all Force Generators against each Commitment Detail, which is the summation of the L1 Assessments.

14.4.5. The main observation regarding the assessments in both the View 1 and View 3, is there are no quantitative details and qualitative information is very limited. The *CDS FP&R Directive* requires quantitative measures and specifically notes measures for personnel, equipment, ammunition, sustainment parts and supplies, and infrastructure, but the status of these resources are not used in any respect with the FP&R Collection Tool.

CDS Directive for CAF Posture and Readiness 2013

15. The *CDS Directive for CAF Force Posture and Readiness 2013*, its annexes and appendices specifies a variety of requirements including the need to use quantitative measures when assessing CAF readiness. Annex A specifies:

> *FP&R performance measures will be expanded over the coming year to more effectively link outputs to major resource areas* ***(people, equipment, ammunition, sustainment parts and supplies, infrastructure)*** *so that cause-effect relationships can be more readily identified, thus enabling the CDS to direct and manage resources assigned to the operational force for specific readiness objectives in Horizon 1.*

However, no detailed quantitative measures are specified other than that the FP&R needs to be linked to the Program Activity Architecture (PAA). Separate from this task SJS is actively investigating linking the PAA to FP&R. In discussions with SJS staff, it was confirmed that FP&R Workbook is

purposely designed to be entirely qualitative. Quantitative measures are not intended to be satisfied with this version of Workbook, but future versions will expand on the type of data that is captured.

16. Several observations were made regarding the current FP&R data which are noted. Importantly, it was agreed that the Commanders' assessments are their responsibility, but there were comments amongst SJS staff that anecdotal data from other systems do not always agree with the Commanders' assessments. One aspect of the process that is very problematic is that there are often many tasks assigned to capabilities that are concurrent, which makes it difficult to assign resources in a quantitative way and then develop a mathematical system to determine readiness. In the end, determining readiness is more of an art than a science and SJS staff need to rely on L1 staff assessments. However, it was also agreed that quantitative data needed to be incorporated into the process in order increase objective analysis.

Alternative to FP&R Collection Tool

17. The Force Posture and Readiness process would have more capabilities if the data were managed in a database like Access. There are inconsistences in the way the current FP&R data has been maintained – they still work, but they could be improved. For example, there are several instances where there is a single Task Statement and several Commitment Details and other cases where there are multiple Task Statements each with a single Commitment Detail. There are also cases where the In-Year Assessment is blank, although this may only on the unclassified version that was provided. Below is a comparison between databases and spreadsheets that demonstrates the advantages of databases:

Table 1 – Database versus Spreadsheet Comparison

Attribute	**Spreadsheet (Excel)**	**Database (Access)**
Data entry edit control	Spreadsheets can specify formats, but they are less capable in preventing invalid data from being entered.	Data formats can be specified and the database will prevent entry of data with invalid format. Access will better control data entry to reduce data entry errors.
Prevent duplicate record entries	Spreadsheets cannot easily prevent duplicate records from being created. Sorting and running reports are required to identify and remove duplicate records.	When properly designed a database will prevent duplicates from being created.
Wasted data entry	Spreadsheets display data horizontally and if two values can be entered in one field, either two rows are created with data for the other fields repeated on the rest of row, or two values are entered in one cell. This process leads to confusion in reviewing the data and can also lead to duplicate rows.	In a database, the main data entry can be linked to two or more records, but the remaining data does not need to be replicated. To review data in different ways, different reports can be generated, but the raw data does not need to be modified or moved.

Attribute	Spreadsheet (Excel)	Database (Access)
Data relationships	Spreadsheets link data horizontally so that if one field needs two or more entries, a separate cell for each entry is required and this quickly becomes confusing when some records only need one data entry for this field and other records need more.	A database is designed to link multiple related data entries together.
Mandatory data	Spreadsheets cannot easily make a specific cell mandatory.	It is very easy to make a field mandatory in a database.
Linking data	Spreadsheets link data mostly by displaying data in a row. There are advanced functions that link data from multiple rows, but these do not prevent duplicates and viewing becomes more complex.	Data can be created in multiple tables and then linked as required without duplicating data. Reports can be generated to produce the view of data desired without worrying about duplicates and while keeping the reports simpler to show only what is required.
Reports	Reports are not easily produced in spreadsheets. The spreadsheet is the data repository, the view, and the report all in one. Producing reports can be done with sorting and filtering, but there are limitations.	Databases use tables to store the data and the reporting capability is used to provide reports which can be customized and produced more closely to exactly what is required.
Volume of data	Spreadsheet performance will be reduced with a large volume of data.	Databases perform much more quickly than spreadsheets with large volumes of data due to their structure. This may not be a current issue with FP&R, but performance could be an issue as more data is added in the future.

18. Spreadsheets do have some advantages over databases. For example, spreadsheets are easy to create and very good at relating different numerical fields and generating results for complex calculations. Spreadsheets can also displaying data in different types of graphs that automatically change as the data in the spreadsheet changes. However, with the current qualitative nature of the FP&R data these feature provide no advantage to a spreadsheet over a database.

19. As stated above, there are three entities used in the FP&R process and which could be used in a database and they are described below.

19.1. CFDS Missions, Tasks, and Commitment Details. This is the "demand" in the FP&R process, the Government of Canada Mission requirements. This entity could be created in three parts, one each for the Missions, Tasks, and Commitment Details, but they could also be combined into one entity because there are only about 50 records and they are not expected to increase significantly. The Commitment Details are only associated to one Task, and each Task is only

linked to one Mission as is the case with FP&R, so these one-to-one relationships do not require separate tables for the Missions and Tasks. The Missions and Tasks hold the basic descriptive information as in the FP&R Collection Tool and a "Lookup Lists" could be created for the Missions and Tasks to control their content instead of creating separate small tables. The core requirements such as "Endurance", "Readiness State", and "Response" would be attributes of the Commitment Details. Other attributes such as "Priority" could be added later, but normally they should be added to the Commitment Details.

19.2. Force Generational Capabilities and Force Elements. This is the "supply" in the FP&R process, the CAF Capabilities that satisfy the government requirements. This entity could be created in two parts, the FGCs and the Force Elements, linked together with the Force Elements subordinate to the FGCs. The Force Elements do not currently exist in FP&R, but they are used in the Capability Base Planning (CBP) process and are related to Department Identification Numbers or Dept Ids. With the Force Elements will be the associated resources and other attributes such as the location. The FGCs would be simple to create, but the Force Elements will be problematic because from the CDB process discussions, multiple Force Elements and portions of Dept Ids may be associated to FGCs. Multiple Force Elements is not a problem, but if only portions of Dept Ids are used to support FGCs, it may be difficult to provide data that clearly identifies the resources that are contributing to the FGCs. Also, it will be necessary that Force Elements be linked to more than one FGC which will make it more difficult to quantitatively allocated Force Element resources to FGCs.

19.3. Force Posture and Readiness Assessment Status. Force Posture and Readiness is the third entity and includes three levels of statuses, the Force Generational Capability Commitment Status, the Force Generator Commitment Detail In-Year Assessment, and the CFDS Commitment Details In-Year Assessment. In addition there are L1 Commanders' Comments that may be linked to the FGC Commitment Statuses.

19.3.1. The Force Generational Capability Commitment Status is result of assessing the Force Generational Capabilities against the Mission, Task, and Commitment Detail requirements for an assessment year. It will reflect the Commitment Status of the FGC comparable to the View 3 worksheets, however in addition to the current L1 Commanders Notes, Commitment Status, and Limitations and/or Restraints, this entity will also reflect the actual State of Readiness, Responsiveness, and resources allocated to the Commitment Details. Given that all the current data is qualitative, completion of these data fields will also be qualitative and partially a manual process. However, the new structure will provide the opportunity in the future to adjust with additional data. Other new data fields may also be added that reflect resources committed to these tasks.

19.3.2. The Force Generator Commitment Detail Status will be a summary of the Force Generational Capabilities Commitment Statuses for all FGCs for a Force Generator for a Mission, Task, and Commitment Details for an assessment year. The process will generate a new record or modify an existing record that links and combines all the necessary data and a report will provide all the necessary information for periodic reporting. The report may be saved and will be comparable to the View 3 In-Year Assessments and the View 1 L1 assessments.

19.3.3. The CFDS Commitment Details In-Year Assessment will also be recorded in a new table and a detailed report can be produced that will be summarize of Force Generator Commitment Detail Statuses for an assessment year.

20. A key to developing the database structure will be the availability of data related to the Force Element resources, but this document intentionally does not attempt to identify specific data that should be used. This is beyond the scope of this task and in any case functional experts will be required in the mentioned resource areas to identify and develop the requirements and then the specific data.

21. Summary. The focus of the database structure described above and in further detail in Annex B, is to record separately the FP&R requirements from the capabilities established to satisfy the requirements. While the requirements are fairly stable, the capabilities vary constantly, but the current FP&R process does not track changes in capabilities. With the requirements and capabilities defined, the proposed database will facilitate a process to match the requirements to the capabilities. Once matched the proposed process will still require judgement on behalf of L1 staff to assess if there are deficiencies, but at least there will a direct comparison and quantitative data will begin to be used. The introduction of quantitative data with a database structure will also instigate more objective analysis. Discussions will be required between SJS and L1 staff to jointly develop metrics and it will take time to evolve properly, but it will be a start.

Strategic Joint Staff FP&R Data Collection Process

Current FP&R Data Collection Process

22. Several discussions were held with the SJS staff to discuss the current FP&R data collection process. Primarily, the process involves SJS staff dealing with their counterparts in L1 organizations to enter data into the FP&R Collection Tool which is outlined below:

23. Update Force Generator Capabilities and Readiness Status. This is the primary semi-annual activity where the L1 staffs provide updates to SJS regarding the Commitment Status of their FGC.

23.1. SJS-J5: The current version of the FP&R Master Workbook is archived to create a comparative reference for the new data.

23.2. SJS-J5: A copy of the FP&R Master Workbook is created as the foundation for the next report.

23.3. SJS-J5: A “Deployed Workbook” specific to each L1 is created and distributed via email to each L1.

23.4. L1: Each L1 updates the Commitment Status on their View 3 FP&R Task Table for each Assessment Period across Horizon One.

23.4.1. The Commitment Status cells are updated by each L1 which initiates the automated update of each Assessment Period.

23.4.2. Commanders’ Comments are mandatory for L1 Commitments that include Limitations and Restraints. Commanders Comments are welcomed but optional for all other Commitment Status entries.

23.4.3. The updated Deployed Workbooks are saved by the L1 as Amended Workbooks and returned to SJS-J5 via e-mail.

23.5. SJS-J5: The L1 updates are imported into the current FP&R Workbook and the following actions are taken:

23.5.1. The Raw Data spreadsheet is automatically updated when the amended Workbook is transferred into the Master Workbook.

23.5.2. A spreadsheet macro is used to update the View 3 Capabilities worksheet for each Force Generator. This macro creates a red border around the modified fields to aide in easy identification for the Analysts. It also automatically rolls the information up into each Assessment Period. If there are Limitations and/or Restraints on any of the tasks, the related Assessment column will reflect the Limitation or Restraint in priority with Restraint taking precedence.

23.5.3. Another application function populates the View 1 Executive Summary worksheet from the information provided on all of the View 3 Capabilities worksheets including Assessment rollups. If there are any Limitations and/or Restraints on any of the Force Generators in a given year, the Executive Summary Yearly Assessment will reflect all the Limitations and/or Restraints.

23.5.4. Commanders' Notes are also automatically updated in the Master Workbook.

23.6. Another application function compares the data in the different worksheets to the Raw Data worksheet to identify all inconsistencies.

FP&R Data Collection Process Discussions

Analysis of Current FP&R Process

24. As described above, the FP&R data collection process used by SJS and the L1 staffs is not lengthy or complicated, but an analysis is provided below:

24.1. Is there current documentation for the process?

24.1.1. Yes, there is a process document and a glossary of terms and both documents were in the process of being updated. The process document was undergoing only minor changes. There was some minor confusion with some of the glossary terms, but part of the issue was with the structure of the FP&R Collection Tool.

- For example, "Capability Cell" was defined as "The View 3 data entry cells that cross reference between CFDS Specific Task Commitment Details on the left and L1 Force Generational Capabilities across the top. Cells may contain – Commitment Status (Contributing, Dedicated and Employed), Employment Restrictions (Limitations and Restraints) and L1 Commanders Note identifiers." There was no comparable Glossary definition for the cells in the View 1 Executive Summary Sheet.
- Several terms were used interchangeably by SJS that were not in the Glossary and were confusing. For example, "Readiness Packages" and "Capability Element" were used sometimes instead of "Force Generational Capability"

24.2. Does each step in the process have a clear purpose and is it clear who is responsible for each step?

24.2.1. **Yes**

24.3. Is the process flow clear and are there any processes that are duplicated?

24.3.1. **The process flowed well and no duplicate processes were observed.**

24.4. For each activity are there defined inputs and outputs?

24.4.1. **There are no defined inputs. The L1 staff provide analysis and conclusions based on their knowledge of their operations.**

24.4.2. **The outputs are the data entered in the FP&R Collection Tool. From a database perspective there is potential for confusion with the output because a single cell was used for multiple purposes including the Commitment Status, Limitations, Restraints, and L1 Commanders' Note Identifiers.**

24.5. Are the responsibilities of those participating in the process clearly defined and not conflicting with other persons?

24.5.1. **Yes**

24.6. Is the process comprehensive and does it provide all the information necessary to achieve the objectives?

24.6.1. The focus of the analysis in this task was on the processes surrounding the FP&R Collection Tool, not the entire FP&R process. However, it appeared that the FP&R process relied on almost totally on the qualitative input of the L1 staff supported by limited data. While it is accepted that L1 staff need to assert the readiness of their Force Generators including the Limitations, Restraints and other factors, there should be additional data and documentation to support analysis and provide confidence that the readiness is fully valid and substantiated.

25. Overall, there are no issues with the current FP&R process itself, although additional data should be incorporated into the process. The process has been kept simple and the FP&R Collection Tool has been designed to facilitate the process with no noteworthy problems observed.

Capability Based Planning (CBP)

26. CBP is a process directed by the Chief of Force Development and the output is generated by Joint Capability Planning Teams (JCPT) that include wide L1 staff representation supported by CFD analysts. The process assesses the ability of the CAF to meet government expectations in a variety of scenarios derived from the CFDS missions and tasks and set 15 or more years in the future. The CBP process established mappings between missions and tasks, between tasks and capabilities and between force elements and capabilities. Capability supply and demand is assessed against standardised Measures of Capability (Annex C) in terms of:

- Scale of Effect
- Survivability
- Reach
- Persistence

- Responsiveness
- Interoperability

27. Scenarios are assessed independently and for each the capabilities are evaluated qualitatively based on the expertise of the Joint Capability Planning Team (JCPT), but there is significant data provided by SAST. CBP also assesses the structure of organizations that are executing the scenarios and the equipment, personnel, and organizations will be varied to test the capabilities using the same resources organized differently. A further complementary analysis process is being established which assesses the quantities of force elements in the force structure by simulating the ability of the CAF to meet the demand of sampled sequences of future scenarios.

28. The evaluation process also examines various risks using the PRICIE model (Personnel, Research & Development, Infrastructure and Organization, Concepts, Doctrine and Collective Training, Information Management, and Equipment Supplies and Services). Capabilities and Force Elements are not related to these PRICIE elements directly, but rather PRICIE is used to qualify and support conclusions and assessments made as they conduct a CBP cycle. The CBP assessments are then used to advise DND senior management of possible adjustments to future investment plans. The results could change future Investment Plans in personnel, training, research and development, organizations, doctrine, equipment, etc. A schematic of the CBP process is attached as Annex C.

Comparison of FP&R to CBP

29. The Force Posture and Readiness and Capability Base Planning processes have similar objectives and they appear quite complimentary, but the processes are different. Both processes involve L1 staff, but FP&R is mostly done at a distance via e-mail, phone, and documentation. By comparison, CBP processes are carefully managed discussions and simulations during in extended meetings and discussion sessions. Displayed below is a comparison of various aspects of FP&R and CBP.

Table 2 – FP&R – CBP Comparison

Aspect	Force Posture and Readiness	Capability Base Planning
Time frame	Current year plus 3 years	15 plus years in the future
Purpose	From the *CDS Directive*, FP&R characterizes the force in relation to a set of missions from CFDS and establishes a quantifiable relationship between readiness, operational requirements and GoC policy and direction.	Identify future possible capability shortfalls and excess capabilities in order to adjust DND investment plans.

Aspect	Force Posture and Readiness	Capability Base Planning
Scope	All current CFDS Missions, Tasks and Commitment Details. Some scenarios for concurrent activity are analysed by L1 and SJS staff.	A variety of scenarios in the future based on CFDS Missions and Tasks. Multiple concurrent scenarios are reviewed if they are considered possible. A minority of CFDS Missions and Tasks are analysed.
Data used	Data is qualitative and provided by L1 staffs. Data includes Missions, Tasks, Commitment Details, Force Generational Capabilities, and qualitative input by L1 staff, but there is no source system data.	Data used is from SAST and originates from HRMS, DRMIS financials, and CBP, which includes organizational and financial data. Equipment and capability information is provided by the L1 staff. There is no source system data from DRMIS non-financial data or infrastructure.
Assessment criteria and process	L1 staff assess qualitatively whether there are any Limitations or Restraints on Force Generational Capabilities in meeting Commitment Detail requirements.	Qualitative assessments of CAF capabilities are made of various scenarios based on standard capability scales by L1 and CFD staff using SAST data and the PRICIE model.
Process	SJS staff manage FP&R Collection Tool, coordinate updating of data with L1 staff, and perform analysis. Liaison with L1 staff is primarily done by e-mail, telephone, and through directives and other correspondence.	JCPT (L1 and CFD staff) meet on 3 year cyclical basis to review scenarios, consider data, and assess capabilities. Liaison with L1 staff is done at face-to-face meetings with all L1 staff over extended periods.

30. From the above comparison there are many similarities and some differences between the FP&R and CBP processes. Both processes are assessing CAF capabilities against CFDS requirements, but FP&R considers all of CFDS and is looking at the present and near term, while CBP is looking far into the future and is assessing many scenarios, but not the full CFDS requirements. CBP is analysing considerably more data, but both processes rely on qualitative assessments. CBP also has a more structured process and includes a regularly scheduled team analysis. By comparison, FP&R is centrally coordinated by SJS and has a less structured process because there is less data to consider, less time to complete the assessments, and they are dealing mostly in the present. While both processes are essentially measuring the CAF capability gap, their assessment criteria are not similar.

Finally, until recently the two processes functioned independently from each other, but they now recognize there are possibly opportunities in coordinating their activities.

31. In summary, the CBP and FP&R processes have similar objectives but they have evolved independently resulting in different processes, data, and analysis methods. The CFD and SJS staffs have had recent discussions regarding sharing data and there appeared to be serious interest by both parties in more extensive collaboration.

Other DND Information System Data

32. The FP&R process currently operates in a data vacuum, essentially using no data from any corporate DND information systems. The FP&R Collection Tool is an Excel Spreadsheet application that was developed internally by the SJS staff and all data is entered manually into the FP&R application and maintained by SJS and L1 staffs that participate in the process. The result is a system that has no true quantitative data which makes it very impractical to develop any quantitative measures. Outlined below are other DND information systems that could be used to provide data to FP&R to support readiness evaluation, analysis, and reporting to senior DND management.

33. Strategic Analysis Support Tool (SAST). The SAST system is operated by the Directorate of Capability and Structure Analysis Support (DCSAS) and is an application that contains data from several DND legacy information systems. The SAST system "ingests" data from DND systems including HRMS (PeopleSoft), Reserve Pay, Regular Force Pay, financial data from DRMIS, and the Capability Based Planning spreadsheets. (SAST does not have DRMIS engineering, maintenance, inventory, and other non-financial data.) On a monthly basis the data is extracted from the source systems and imported into SAST. SAST can also import unstructured files such as Word documents, PDF files, web pages, blogs, and twitter data.

34. A key aspect of SAST is that it can link and merge data from multiple sources into one harmonized view, allowing analysis to be conducted across multiple systems simultaneously. Although not the system of record for this data, SAST can facilitate extensive analysis, reporting, and visualization of large volumes of data in a timely manner. This capability avoids the necessity of developing custom queries and reports within the source systems, an activity that would have to compete with other requirements in the source systems.

35. An important consideration is that SAST is a stand-alone system that is not on the DWAN and to which users outside DCSAS do not have access. Importing data into SAST requires the source system to export their data onto a portable electronic media that DCSAS then imports into SAST. Currently also, SAST does not export data for users outside of DCSAS, but this should be feasible.

36. The data that may be of use from SAST are as follows:

36.1. HRMS. HRMS contains DND information related to personnel, including civilian and military employee identification numbers, their occupations, qualifications, education, current positions, and a very wide variety of related data. With SAST's query and reporting capability, it is able to dissect HR data by L1 organization down to Force Elements and further to sections and sub-sections if the data is provided. It can simultaneously sub-divide the data by Regular Force, Reserve Force, Civilian personnel, by occupation or trade, military rank or civilian level, by gender, age group, geographic location, and almost any data element that is available within HRMS. With the HRMS data and the SAST capabilities, it would be possible to report Force

Element organizations' HR to assist in determining the readiness of personnel based on objective metrics.

36.2. Several discussions were held with SJS and DCSAS staffs and it was agreed that the HRMS data would be useful in assessing Force Elements' readiness, but significant analysis would be required and the process would need to involve the L1 staffs. The available data would need to be analysed to determine which data could be used, how it should be interpreted, and if metrics could be defined as Key Performance Indicators (KPIs). It is possible that HRMS may not contain all the data necessary for a fair evaluation of personnel readiness and additional data may be required. There was a strong consensus that the data may be used to support readiness ratings, but it will the responsibility of L1 staffs to interpret the data and decide on readiness.

36.3. DRMIS Financials. DRMIS is the system of record for DND financial data and most engineering, maintenance, and inventory data, but only the DRMIS financial data is currently ingested into SAST. The financial data includes all budgets and expenditures by Force Element as well as for higher and lower organizational levels in DND. DRMIS tracks other financials such as operations and maintenance procurement costs by commodities (for example fuel, ammunition, maintenance spares, furniture) and capital project procurement. DRMIS also tracks financial expenditures for individual weapons systems (specific aircraft) and other equipment systems (specific radar set), by grouped systems (all of the same aircraft type), but it would have to be verified if any of this latter data has been ingested into SAST.

36.4. SAST could link DRMIS expenditure data to Force Elements, CFDS Missions and Tasks to track expenditures related to the FP&R mandate. SAST and DRMIS use Force Elements and Department Identifications to identify DND organizations and are probably the best data entities to focus on for further analysis. SAST could be used to organize the data for FP&R and then the file could be exported for use within the FP&R process and a new database application.

36.5. Capability Based Planning (CBP). CBP is a process whereby the Joint Capability Planning Team (JCPT) convenes on cyclical basis to identify CAF capability deficiencies to meet the CFDS Missions requirements in the future. Originally the team used a variety of spreadsheets to document their analysis, which were then ingested into SAST. However, now the team uses data collection tools to capture CBP work directly into SAST. CBP has data at the Force Element level and lower, and includes information on capabilities and related missions. The data is comparable to FP&R, but SAST data used in CBP is based on extracts from multiple DND legacy information systems, so there is considerably more data in CBP than in FP&R. Attached as Annex D is a comparison of FP&R to CBP data.

36.6. Other SAST Data. SAST also includes pay system data that may be useful in combination with HRMS data. In the past SAST ingested data from the Materiel Acquisition and Support Information System (MASIS), the Canadian Forces Supply System (CFSS), and the Realty Asset Infrastructure System (RAIS). MASIS included maintenance data and the CFSS held inventory data until both were converted into DRMIS and then these data imports into SAST were discontinued. The RAIS data import was also discontinued, but an explanation from DCSAS on this change was not captured during discussions.

37. Other DND System Data. DBM is the DND lead to develop business intelligence and analytics and will eventually provide consolidated metrics from all DND source information systems including DRMIS (Financials, Supply, and Maintenance), HRMS (PeopleSoft), and other DND corporate systems. Included in the DBM mandate is a requirement for business intelligence related to CAF

readiness. Specifically, according to the Defence Business Management Concept of Operations (DBM CONOPS), one objective of the Defence Business Management Capability is: ***Increased integration and visibility, closer ties, and direct correlation*** *will be established between CF readiness and operational commitments and DND business activities.* (Reference J, paragraph 1.1). There was insufficient time in this task to discuss other DND information systems with DBM staff, however, the primary candidate for further study would have to be DRMIS, the DND corporate Enterprise Resource Management system that has been implemented over the past decade.

37.1. DRMIS Non-Financial Data. DRMIS includes non-financial information related to equipment maintenance, supplies, and ammunition, three categories of data explicitly mentioned requiring readiness measurement by the *CDS Directive for CAF Force Posture and Readiness 2013*. DRMIS is fully functional in supporting operations and the materiel management community, but it has just finished a major development phase and work is continuing to develop DRMIS into a mature system to fully satisfy business requirements. One of the outstanding requirements and currently under development is to develop the business intelligence capability for all DND ERP system users.

37.2. Other DND Information System Data. There remains a need to identify the current information systems that contains the DND infrastructure data, which may be RAIT or a replacement system. Discussions with Defence Business Management and the L1 staff should also be considered regarding what other systems could provide useful information.

Recommendations

Force Posture and Readiness Application and Data

Quantitative Data

38. The use of quantitative data to measure Force Posture and Readiness is highly recommended in order to provide to CAF and DND senior management with objective measures of readiness that can be replicated on regular basis. The specific recommendations are:

38.1. SJS staff should meet with L1 staff to discuss the use of quantitative measures for Force Posture and Readiness. In preparation, SJS staff should develop generic criteria for each of the metrics (personnel, equipment, ammunition, sustainment parts and supplies, and infrastructure) as a starting point for discussion. Guidelines for the developing quantitative metrics are:

38.1.1. Begin the process by considering the data available in the SAST system. Begin with the more obvious possible metrics in each area for which data is available.

38.1.2. Before deciding on the metrics, check the history of the data if possible and avoid selecting metrics that are too volatile. Initially, metrics should be trialed for at least 6 months and refined before they are implemented officially.

38.1.3. For each functional area, develop multiple quantitative metrics to measure readiness. Quantitative metrics need to be focused, but each metric cannot be expected to measure all aspects of an area. Ensure it is well understood exactly what each metric is measuring and what it is not measuring.

38.1.3.1. If possible use system functional experts to assist in deciding on the new metrics and interpreting the results such as administration staff for HR readiness and logisticians for sustainment parts and supplies.

38.1.4. Quantitative measures should be similar for similar types of operations such as for Air Force FGCs, but should vary for between different types of operations such as between Navy and Army.

38.1.5. When considering the data to be measured, consider who has access to the data in the sources system and if the data could be manipulated to affect the results.

38.1.6. As the initial metrics are being developed and trialed, SJS and L1 staff should continue to investigate adding additional possible metrics.

38.1.7. All metrics should be re-evaluated periodically as they become better understood and to respond to feedback and suggestions from L1 staff.

38.2. SJS staff should meet with DBM staff regarding the data that is currently available within Business Objects or will be available in the future, and to discuss beginning the process to analyse data within the appropriate DND information systems available to Business Objects and to develop quantitative metrics for FP&R.

38.3. As the metrics are developed, it is inevitable that some desirable metrics will be identified for which there is no data. For example, within DRMIS it may be desirable to measure the number of essential inventory items that have sufficient stock according to the minimum stock level, but there is no data element that identifies essential inventory items. In order to measure this

metric, it would be necessary to modify DRMIS to create a data element on inventory items that identifies essential inventory items. To facilitate these improvements, it will be necessary to work with the system technical managers and business owners to modify the systems of record business processes to incorporate the additional data for reporting through Business Objects.

39. Using quantitative FP&R metrics is very desirable for the reasons noted above, but it will take time, involvement of L1 staff, and significant analysis to develop reasonable metrics. In the near and medium term, as quantitative data becomes available, qualitative assessments of this data will be essential and will likely continue for some time. The initial metrics developed will probably be used because data is available – not because it is ideal. It will also likely have a narrow focus and will not be suitable as a comprehensive metric – multiple metrics for each area are required for reasonable readiness assessments. Regardless, beginning to develop and use quantitative metrics is highly recommended.

Alternative to FP&R Collection Tool

40. From analysis of the FP&R Collection Tool it is apparent that a database such as Microsoft Access would provide more capability than the current Excel spreadsheet application. This will be particularly true as additional quantitative data is incorporated into the Force Posture and Readiness analysis. Accordingly, it is recommended that the FP&R Collection Tool functionality be migrated to Access or a comparable database application.

41. A detailed recommended structure is provided in Annex B to this report and is summarized below. The following three database entities should be created:

41.1. CFDS Missions, Tasks, and Commitment Details. This entity can be represented by a single table to record all the attributes of the CFDS requirements. This table would be maintained by SJS staff as changes are required, but it would be fully visible to L1 staff.

41.2. Force Generational Capabilities and Force Elements. To facilitate beginning to use quantitative data, the starting point should be the resources associated to Force Elements. In these two tables, the CFDS capabilities will be captured with the Force Element resources applied to CFDS requirements by the Force Generators. While quantitative data is recommended to be included, qualitative assessments are still the best option and are recommended in this process while the gradual incorporation of quantitative data will assist in the assessments. The Force Element addition with quantitative data will significantly change the current process, but the switch to quantitative assessments is still well into the future. Maintenance of the FGCs and Force Elements would be the responsibility of the L1 staff.

41.3. Force Posture and Readiness Status. Force Posture and Readiness is dynamic and it is recommended that the proposed database structure be implemented to take advantage of the dynamics. Similar to the current FP&R, the recommended structure will "roll-up" the lower level assessment to the higher levels. In this data structure, the lowest level will be evaluated and the evaluation will reside in the recorded data in the table FGC Commitment Status. However, since the higher levels are all based on the lower level, the recommended solution will represent these levels though reports. As the FGC Commitment Status is re-assessed and changes, the higher levels will be changed automatically the next time the reports are generated. These reports can also be saved and archived for tracking purposes, but they are entirely comprised of data from the FGC Commitment Status records and other related records in the database.

42. Regarding the recommended structure in Annex B, below are several general comments.

42.1. All elements of the database recommendations should be adjusted based on further analysis during a development process.

42.2. Detailed database specifications will need to be defined during a development process and are not provided in this document.

43. To establish the recommended database application, the requirements should be validated and adjusted as required by SJS staff and then a qualified database developer should engaged to define more details requirements and begin the development.

44. During the database application development, L1 staff should be consulted regarding the data to be collected, the features of the application, and also the update process to be used. Once the application has been developed with a basic functionality, it should be deployed in parallel with the FP&R Collection Tool to engage the L1 staff and assist with refining the application's features.

45. The data from the FP&R Collection Tool should be imported into the database and populated into the tables either using the process below or by the developer using another means.

46. Outlined below are some design considerations:

46.1. Forms should be created to allow users to create and modify records in these tables. In addition to the table data elements listed, it may be desirable to record the User that made the last change to a record and when the change was made.

46.2. SJS should consider whether to archive a version of each record whenever the data is modified so there is a history of all changes. SJS needs to consider if there are any benefits to this, but keeping an extra copy of all versions of records will be more complicated.

46.3. SJS needs to decide with the L1 staff whether to allow records to be deleted or whether records will only be archived.

46.4. During the design and trial phases, expect that requirements for additional reports will be identified; only the main reports required to facilitate the process have been indicated in Annex B.

46.5. It is recommended that access to the new application be made available on the DWAN through SharePoint or a similar capability so that updates may be made by L1 staffs at their home office instead of using e-mail.

Strategic Joint Staff FP&R Data Collection Process

47. The current FP&R Collection Tool process should continue to be used until a database application is developed and ready for use.

48. The goals of FP&R and CBP are similar, therefore, SJS should continue to hold discussions with DCSAS and the CFD analysts regarding integrating or at least coordinating the FP&R and CBP processes.

49. The FP&R process should incorporate data for personnel, equipment, ammunition, supplies, and infrastructure to support decision-making and analysis. With additional supporting data, the SJS process should be expanded to include more objective analysis of the data. The changes to the process will in part need to depend upon the database solution that is developed, therefore further detailed

recommendations on process changes will not be provided here, although SJS should consider the processes that have been established for CBP.

50. From the CBP process, SJS should consider using the standardised Measures of Capability and the PRICIE metrics.

Other DND Information System Data

51. Moving forward, the FP&R process should begin to use data from the main DND information systems in order to develop quantitative measures of Force Posture and Readiness. Given the proximity and availability of the SAST system and its capabilities, the first option should be to consider the data in SAST. Once this action has been initiated, the next step should be to identify other DND information systems that could provide data that is not available in SAST.

52. Strategic Analysis Support Tool (SAST). The SAST system has considerable data from DND source information systems, is a powerful application, and should be used to support the FP&R process. However, since access to SAST is limited to DCSAS staff, SAST should be used to provide data to a database application controlled by SJS for the FP&R process. SAST should also import data from the new FP&R database to be used for more advance queries and analysis and also possibly to use FP&R data with the CBP process.

52.1. HRMS Data. HRMS data within SAST should be examined by SJS and DCSAS staff to identify the data elements that could be used to evaluate Force Generational Capability and Force Element posture and readiness. Some suggested metrics are percentage of personnel that are fully trained, percentage of established positions that are filled with personnel, percentage of personnel that are occupied with personnel of the correct rank or civilian level. SAST should also be used to track historical time-series data, which is the trending of specific measures from period to period (month-to-month or year-to-year), and also to project the same metrics forward within Horizon One.

52.2. DRMIS Financial Data. SAST should be analysed by SJS and DCSAS staff to identify how FP&R Force Generational Capabilities could be linked to DRMIS financial data. While FP&R FGCs do not currently include Force Elements, this information could be provided by L1s, which could then be linked to the financial information in SAST. From the FGC – Force Element information, expenditures by Force Elements should be reported by SAST for commodities, projects, and for operations and maintenance. Support from ADM(Mat) could also be measured by linking expenditure information to the procurement directorate and section/sub-section in ADM(Mat).

52.3. Capability Based Planning. The data currently used by CBP in SAST should be reviewed for possible use by FP&R. Although CBP does not cover all Missions and Tasks and is based on scenarios significantly in the future, the data and structure of the data used in the CBP process are comparable to the metrics that being considered by FP&R. This initiative is also advisable if the FP&R and CBP processes become more coordinated. The two processes could also realize additional efficiencies by using the same data as it becomes available.

52.4. Other SAST Data. SJS staffs should review with DCSAS the data currently used in the SAST system to consider what other data may be available for use with FP&R. It is also recommended that DCSAS consider obtaining equipment and inventory data from DRMIS for use with the FP&R and CBP processes. While DBM is ultimately responsible for DND business

intelligence and analytics, it may be feasible for DCSAS to assist with developing FP&R metrics from DRMIS data more quickly than DBM.

52.5. SAST data that is identified for use by FP&R should be organized, extracted and provided to SJS for use by the new database as it is developed. The new database could be used for the FP&R process with SJS and L1 staff using standard queries and reports that are necessary to operate. However, the FP&R data should be imported into SAST for more advanced queries and reports instead of trying to develop this capability within the FP&R database. For example, it may be easier to utilize SAST capabilities to report and analyze the current costs of Force Element readiness and to estimate the cost of increasing and decreasing readiness, which would be helpful in decision making relating to the allocation of resources.

53. DRMIS Non-Financial Data. SJS staff should meet with DBM staff with the aim of identifying readiness metrics for equipment maintenance, ammunition and supplies from the DRMIS system. SJS should also involve the L1 staff in these discussions.

54. Other DND Information System Data. SJS staff should also meet with DBM staff to discuss if there are other DND corporate systems that could contribute to FP&R readiness metrics.

Annex A to Final Report – Strategic Joint Staff Force Posture and Readiness Process Analysis

FP&R Collection Tool Data Layout

55. Each of the sections below lists and describes the data in each of the three main workbooks used in the FP&R Collection Tool application.

Notes

56. The Notes worksheet has three types of entries, L1 Commanders Comments, CFDS Task Statements, and Common Capabilities Related to All Missions. Below is a screenshot of the L1 Commanders Comments, CFDS Task Statements on the Notes worksheet:

	A	B	C
1	**Level**	**1 Commanders' Comments - Current as of: 31 Mar 2013**	
20	**S**	Possible AOR gap in CTG while awaiting JSS IOC. HMCS PRESERVER will remain the HR AOR until replaced by HMCS PROTECTEUR in late 2013.	
21	**T**	CJOC to develop an OS Hub FE Framework which will inform the development of FG Support Plans. CJOC to develop a Global C2 Preparedness Framework.	
22	**U**	CJOC to develop a Global C2 Preparedness Framework	
23			
24	**Task**	**Statements - Current as of: 31 Mar 2013**	
25	**CFDS**	**Mission 1. Conduct Daily Domestic and Continental Operations, Including in the Arctic and Through NORAD.**	
26	**1a.**	Mobilization of the CAF to protect and defend Canada against armed aggression and in response to any crisis.	
27	**1b.**	Force Generate (FG) and maintain SAR response capabilities that are able to reach those in distress anywhere in Canada on a 24/7 basis.	
28	**1c.**	FG for FE capabilities that enable monitoring of Canada's territory to include national airspace, coastal and maritime surveillance & response.	
29	**1d.**	FG capabilities which can assert Canada's sovereignty and demonstrate a visible Canadian presence in the Arctic.	
30	**1e.**	FG capabilities which can sustain CAF response to domestic events, crises or security requirements until the GC directs otherwise	

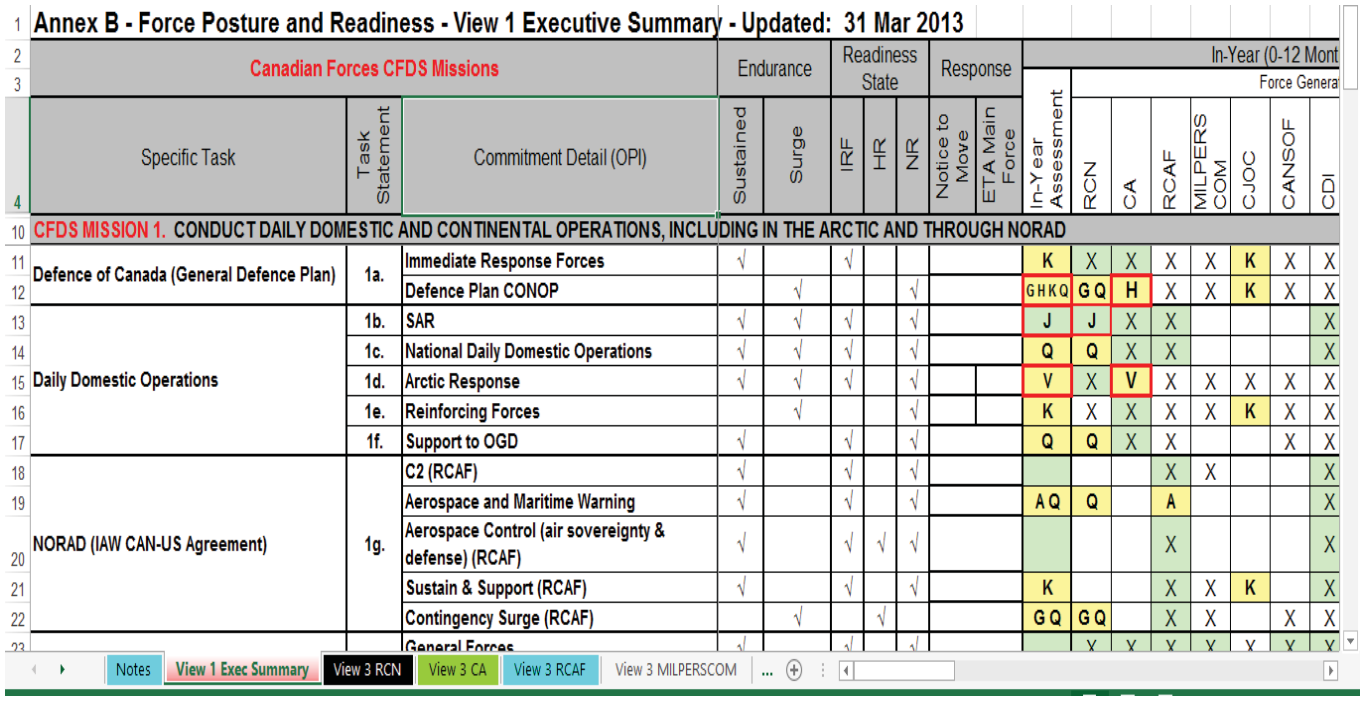
57. Below is a description of the data from the Notes worksheet.

Table 3 – Notes Worksheet

Field	Field Description
L1 Note Identifier Task Number	The L1 Note Identifiers are used in the View 1 and View 3 worksheets to refer to Limitations, Restraints, and other comments in the Notes worksheet. or Task Number from CFDS
L1 Commanders Comments Task Statements	Actual L1 Commanders' Comments related to the Note Identifier. These Comments describe the Limitations or Restraints that are provided by the L1 Commanders during the FP&R collection process. L1 Commanders may also record comments that are not limitations or restraints. The Task Statements are the official tasks from the CFDS. This area also includes the official descriptions of the CFDS Missions 1 through 6.

View 1 – Executive Summary

58. The Executive Summary worksheet contains the L1 consolidated assessments of the current ability of each Force Generator to deliver against each task and will also include any L1 Note Identifiers that reflect Limitations, Restraints and/or other comments. Below is a screenshot of the View 1 - Executive Summary worksheet:



Annex B - Force Posture and Readiness - View 1 Executive Summary - Updated: 31 Mar 2013

Canadian Forces CFDS Missions			Endurance		Readiness State			Response		In-Year (0-12 Mont							
											Force Genera						
Specific Task	Task Statement	Commitment Detail (OPI)	Sustained	Surge	IRF	HR	NR	Notice to Move	ETA Main Force	In-Year Assessment	RCN	CA	RCAF	MILPERS COM	CJOC	CANSOF	CDI
CFDS MISSION 1. CONDUCT DAILY DOMESTIC AND CONTINENTAL OPERATIONS, INCLUDING IN THE ARCTIC AND THROUGH NORAD																	
Defence of Canada (General Defence Plan)	1a.	Immediate Response Forces	√		√					K	X	X	X	X	K	X	X
		Defence Plan CONOP		√			√			GHKQ	GQ	H	X	X	K	X	X
Daily Domestic Operations	1b.	SAR	√	√	√		√			J	J	X	X				X
	1c.	National Daily Domestic Operations	√	√	√		√			Q	Q	X	X				X
	1d.	Arctic Response	√	√	√		√			V	X	V	X	X	X	X	X
	1e.	Reinforcing Forces		√			√			K	X	X	X	X	K	X	X
	1f.	Support to OGD	√		√		√			Q	Q	X	X			X	X
NORAD (IAW CAN-US Agreement)	1g.	C2 (RCAF)	√		√		√						X	X			X
		Aerospace and Maritime Warning	√		√		√			AQ	Q		A				X
		Aerospace Control (air sovereignty & defense) (RCAF)	√		√	√	√						X				X
		Sustain & Support (RCAF)	√		√		√			K			X	X	K		X
		Contingency Surge (RCAF)		√		√				GQ	GQ		X	X		X	X
		General Forces	√		√		√				X	X	X	X	X	X	X

Notes | View 1 Exec Summary | View 3 RCN | View 3 CA | View 3 RCAF | View 3 MILPERSCOM

59. Below is a description of the data from the Executive Summary worksheet:

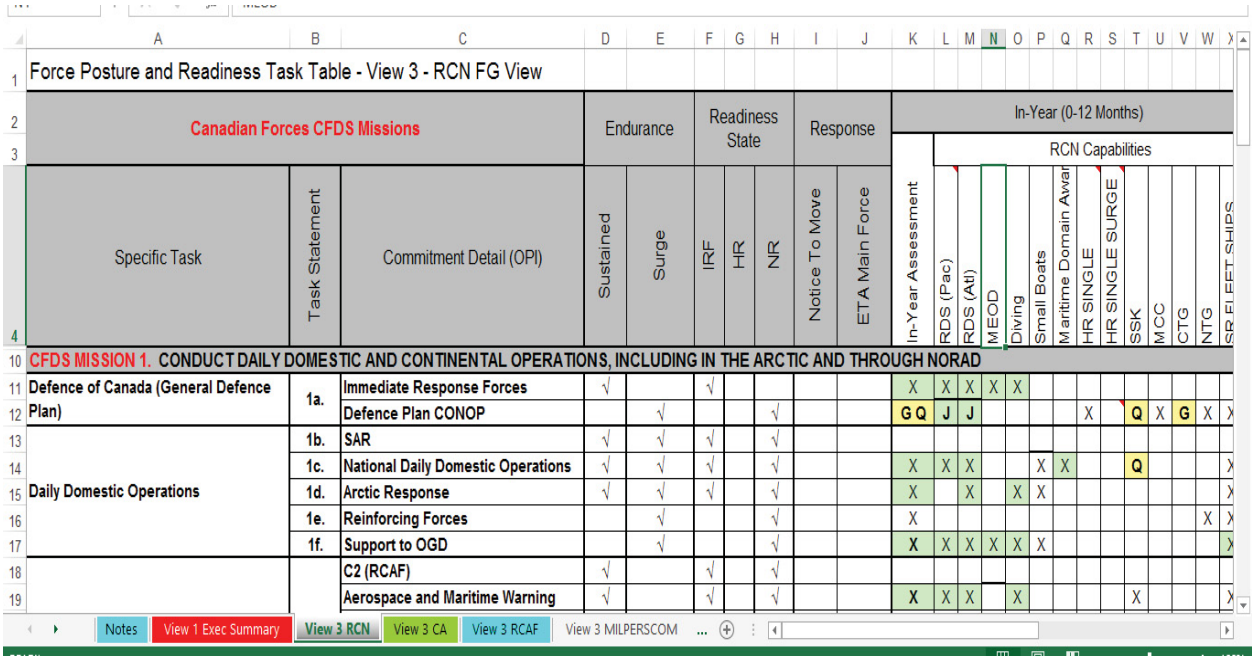
Table 4 – Executive Summary Worksheet

Field	Field Description	Comments
CFDS Mission	Number of CFDS Mission	CFDS Missions 1 through 6.
	Mission Name according to CFDS	Example: *Conduct Daily Domestic and Continental Operations, including in the Artic and through NORAD*.
Specific Task	Name of Specific Task	Example: *Daily Domestic Operations*
Task Statement	Task Number from CFDS	Example: *1c*. The Task Descriptions are shown on the Notes worksheet. Example: *FG for FE capabilities that enable monitoring of Canada's territory to include national airspace, coastal and maritime surveillance & response.*
Commitment Detail	Description of Commitment Detail.	Example: National Daily Domestic Operations The Commitment Details should also be numbered.
Endurance	Whether the task requires a Sustained and/or Surge capability.	Example: Surge
Readiness State Required	Whether the task is Executing, requires IRF, HR, or NR, or is Sustaining and Enabling.	Example: IRF and NR
Response	Whether the task has a specified Notice to Move and/or ETA Main Force.	This requirement is specified when necessary.
Force Generator	All Force Generators providing Assessments are listed.	Example: Royal Canadian Navy

Field	Field Description	Comments
L1 Assessment	The Commitment Statuses from the FGC View 3s are consolidated in each cell for each reporting period for each L1 for each Task.	There are a variety of responses possible as follows: No Contribution - blank Contributing – X in white square Executing – X in green square Dedicated – X in purple square This field also includes Notes for Limitations and Restraints. When there has been a change to the Commitment Status since the last report, the cell affected has a Red border.
In-Year Assessments	Consolidation of all L1 Assessments for each year in Horizon One.	All L1 Assessments are consolidated in this field for "In-Year", "In-Year +1", "In-Year +2" and "In-Year +3". It was noted that in some cases this field is blank when the L1 Assessment is completed by one or more L1 Force Generators.

View 3 – Force Generational Capabilities Commitment Status

60. The FGC Commitment Status worksheet contains the assessments for each Capability of the Force Generator to deliver against each task and will also include any L1 Note Identifiers that reflect Limitations and/or Restraints. Below is a screenshot of the View 3 worksheet for the RCN:



Force Posture and Readiness Task Table - View 3 - RCN FG View

Canadian Forces CFDS Missions			Endurance		Readiness State			Response		In-Year (0-12 Months)															
										RCN Capabilities															
Specific Task	Task Statement	Commitment Detail (OPI)	Sustained	Surge	IRF	HR	NR	Notice To Move	ETA Main Force	In-Year Assessment	RDS (Pac)	RDS (Atl)	MEOD	Diving	Small Boats	Maritime Domain Awar	HR SINGLE	HR SINGLE SURGE	SSK	MCC	CTG	NTG	SR FLEET SHIPS		
CFDS MISSION 1. CONDUCT DAILY DOMESTIC AND CONTINENTAL OPERATIONS, INCLUDING IN THE ARCTIC AND THROUGH NORAD																									
Defence of Canada (General Defence Plan)	1a.	Immediate Response Forces	√		√					X	X	X	X	X											
		Defence Plan CONOP		√			√			G Q	J	J					X		Q	X	G	X	X		
Daily Domestic Operations	1b.	SAR	√	√	√		√																		
	1c.	National Daily Domestic Operations	√	√	√		√			X	X	X			X	X			Q						
	1d.	Arctic Response	√	√	√		√			X		X		X	X										
	1e.	Reinforcing Forces		√			√			X												X	X		
	1f.	Support to OGD		√			√			X	X	X	X	X	X										
		C2 (RCAF)	√		√		√																		
		Aerospace and Maritime Warning	√		√		√			X	X	X		X					X						

Notes | View 1 Exec Summary | View 3 RCN | View 3 CA | View 3 RCAF | View 3 MILPERSCOM

61. Below is a description of the data from the View 3 FGC Commitment Status worksheet:

Table 5 – Force Generational Capability Commitment Status Worksheet

Field	Field Description	Comments
CFDS Mission	Number of CFDS Mission	This data is the same as on the View 1 – Executive Summary worksheet.
	Mission Name	
Specific Task	Name of Specific Task	
Task Statement	Task Number from CFDS	
Commitment Detail	Description of Commitment Detail.	
Endurance	Endurance and/or Surge capability	
Readiness State Required	Is task Executing, IRF, HR, or NR, or is Sustaining and Enabling.	
Response	Whether the task has a specified Notice to Move and/or ETA Main Force.	
Force Generational Capability	The Capabilities generated by the Force Generator.	Example: Ready Duty Ship - Pacific
FGC Commitment Status Assessment	The Commitment Statuses for each of the FGC View 3s are recorded in each cell for each reporting period.	There are a variety of responses possible as follows: No Contribution - blank Contributing – X in white square Executing – X in green square Dedicated – X in purple square This field also includes Notes for Limitations and Restraints. When there has been a change to the Commitment Status since the last report, the cell affected has a Red border.
In-Year Assessments	The L1 Assessments for each task are consolidated for each year in Horizon One.	Each L1 Assessment is consolidated for all FGCs in this field for “In-Year”, “In-Year +1”, “In-Year +2” and “In-Year +3”.

Annex B to Final Report – Strategic Joint Staff Force Posture and Readiness Process Analysis

FP&R Recommended Database Structure

62. There are three groups of tables below, CFDS Requirements, CFDS Force Generational Capabilities, and the CFDS Force Posture and Readiness Assessment Status. Like CBP, the Requirements are the "demand", the FGCs are the "supply", and the FP&R Assessment Status is the resulting assessment of supply versus demand.

63. In the tables below, a database structure is recommended which could be done in Access or another relational database application. The design provided below is general and the specifications provided are not exact, but provide guidance in how the FP&R data could be organized in a database. A few database properties are specified that are explained as follows:

63.1. Each table below will describe a table in terms of a possible Table Name, the Data Elements within each table, and how the Tables are related to other tables. The type of Data Elements, size of the fields, and other design attributes are beyond the scope of this document and will not be provided.

63.2. Additional data elements may be added to the tables, but included are the main mandatory data elements and a few optional data elements.

63.3. The record key data elements and the data elements that links to the other tables are also shown.

CFDS Requirements

64. The table below specify the CFDS Requirements, which are the Missions, Tasks, Commitment Details, and their associated data. This structure is the starting point for FP&R, therefore it is important to design the database correctly to ensure that the requirements are properly represented.

65. There is a hierarchy of three levels of CFDS Requirements; the Missions, the Tasks, and the Commitment Details. This data could also be designed based on two or three tables linked together such as Missions on one table, Tasks on a second table, and Commitment Details on a third table. However, considering the limited number of data fields, a single table would be simpler. It is recommended that the Commitment Detail Identifier be populated with a numeric, alpha-numeric, or alpha identifier rather than the text of the Commitment Detail for easier database maintenance.

66. Access to create, modify, archive, or delete records in this table should be limited to SJS.

Table 6 – CFDS Requirements

Field Name	Field Description	Mandatory or Optional	Data Entry	Comments
Mission Name	Mission Name according to CFDS	M	Manual or import from FP&R Collection Tool	Example: *Conduct Daily Domestic and Continental Operations, including in the Artic and through NORAD*.

Field Name	Field Description	Mandatory or Optional	Data Entry	Comments
Mission Number *record key	Number of Mission	M	Manual or import from FP&R Collection Tool	CFDS Missions 1 through 6.
Task Number *record key	Task Number according to CFDS	M	Manual or import from FP&R Collection Tool	Example: *B* Each task must have its own unique number. The current FP&R numbering system would have to change.
Specific Task	Name of Specific Task	M	Manual or import from FP&R Collection Tool	Example: *Daily Domestic Operations*
Task Description	Task Description according to CFDS	O	Manual or import from FP&R Collection Tool	Example: *FG for FE capabilities that enable monitoring of Canada's territory to include national airspace, coastal and maritime surveillance & response.*
Commitment Detail Identifier *record key	A unique new Commitment Detail Identifier is required	M	Manual	Example: *CC*
Commitment Detail Name	Name of Commitment Detail	M	Manual or import from FP&R Collection Tool	Example: *National Daily Domestic Operations*
Commitment Detail Description	A longer description of the Commitment Detail could be added.	O	Manual	This is an optional entry that could be added to provide more detail.
Endurance Requirement	Sustained and/or Surge capability	M	Manual	Example: Surge

Field Name	Field Description	Mandatory or Optional	Data Entry	Comments
Required State of Readiness	Required State of Readiness according to CFDS.	M	Manual	*Executing* *Immediate Response Force* *High Readiness* *Normal Readiness* *Sustaining and Enabling*
Required Responsiveness	Required Responsiveness according to CFDS	M	Manual	Required: Notice to Move and/or ETA Main Force

CFDS Force Generational Capabilities

67. The two tables below together will provide the necessary data to specify the CFDS Force Generational Capabilities and the Force Elements. With the structure below, there is a hierarchy of two levels, the FGCs and the Force Elements. The Force Elements represent new data, therefore a starting point has been recommended which can be modified. L1 staff should have access to create, modify, or delete records in these two tables, but security should be designed so that L1 staff can only access tables related to their own Force Generator.

68. One issue with Force Elements that exists relates to the definition and composition of Force Elements. During discussion on the Capability Based Planning process it was noted that often only some sections of a Force Element were allocated to Capabilities, which may require the FP&R process to use organizations of less than the full Force Elements. When this is true then a lower level of a Force Element such as a "section" should be used when the situation is clear and there is a numerical identifier for the section, (several examples of numerical identifiers were shown for sections). While it would be possible to create this data in one table, given the above scenario, two separate tables are recommended. If this solution is progressed, there will need to be data or some other method required when only portions of Force Elements are allocated to FGCs and this strategy will need to be discussed with the L1 staffs.

Table 7 – Force Generational Capabilities

Note: In FP&R, the FGC is a text field, but to migrate to a database it may be preferable to create codes similar to Dept Ids because once the FGC is created as a record key in a database, it is very difficult to change. The current FGCs could then be the FGC Names linked to the codes and while the new FGC code would not be changed, the FGC Names could be easily modified.

Field	Field Description	Mandatory or Optional	Data Entry	Comments
Force Generational Capability *record key	Capability as defined by the Force Generator	M	Manual or import from FP&R Collection Tool	Example: Ready Duty Ship – Pacific
Force Generator	Force Generator to which the FGC is related	M	Manual or import from FP&R Collection Tool	Example: Royal Canadian Navy

Table 8 – Force Elements

Field	Field Description	Mandatory or Optional	Data Entry	Comments
Force Generational Capability #link to FGC	Capability as defined by the Force Generator	M Validated by FGC table	Manual or import from FP&R Collection Tool	Example: Ready Duty Ship – Pacific
Force Element Number *record key	Force Element Number that is assigned to the FGC.	M	Manual or import from SAST	Example: –12345 Department ID or a lower organization level than a Force Element.
Force Element Name	Name of Force Element	M	Manual or import from SAST	Example: HMCS Halifax
Location	Location of the Force Element	M	Manual or import from SAST	Example: Esquimalt BC

Field	Field Description	Mandatory or Optional	Data Entry	Comments
Personnel Data	What numbers and composition of personnel are ready and assigned to the FGC?	O	Manual or import from SAST	Ultimately, it is desirable that quantitative information be entered whenever possible. Initially, this will need to be decided between SJS and L1 staffs.
Equipment Data	What Mission Essential Equipment are assigned to the FGC and what is their capability status?	O	Manual	Ultimately, it is desirable that quantitative information be entered whenever possible. Initially, this will need to be decided between SJS and L1 staffs.
Ammunition Data	What ammunition is assigned to the FGC?	O	Manual	Ultimately, it is desirable that quantitative information be entered whenever possible. Initially, this will need to be decided between SJS and L1 staffs.
Supplies Data	What is the status of repair parts and other supplies assigned to the FGC?	O	Manual	Ultimately, it is desirable that quantitative information be entered whenever possible. Initially, this will need to be decided between SJS and L1 staffs.
Infrastructure Data	What is the status of the infrastructure used by the FGC?	O	Manual	Ultimately, it is desirable that quantitative information be entered whenever possible. Initially, this will need to be decided between SJS and L1 staffs.
Costs Data	What costs are associated to this FGC?	O	Manual	Ultimately, it is desirable that quantitative information be entered whenever possible. Initially, this will need to be decided between SJS and L1 staffs.

Relationships for Force Generational Capabilities and Force Elements

69. In the relationship described below Force Elements are related to FGCs, but they may be related to more than one FGC. This relationship type allows Force Elements to be involved in multiple

FGCs indicating concurrent commitments of the Force Element resources. The relationships with other tables will be describe later in this annex.

> Note: In a database structure with a many-to-many relationship defined it is possible for specific records to have a one-to-one relationship, but if there is at least one many-to-many linkage, the database must be defined with a many-to-many relationship to allow it when necessary.

Table 9 – Relationships for Force Generational Capabilities and Force Elements

Table 1	Table 2	Table 1 Related To Table 2 Data Element	Relationship from Table 1 to Table 2
Force Element Number	Force Generational Capability	Force Generational Capability	Many-to-Many

Data Entry for Force Generational Capabilities and Force Elements

70. Force Generational Capabilities. FGCs are very simple entities and data entry will be by L1 staff.

70.1. The initial creation of FGCs may be by importing the data from FP&R, but subsequently it should be done by L1 staff using a data entry form.

70.2. Once created and linked to Force Elements, FGC cannot be deleted or modified. However, if a new FGC code is created and used as the record key, the FGC Name could be modified if necessary.

70.3. If FGCs are used and subsequently de-linked from all relationships, they should be archived rather than deleted. For control purposes, this function might be limited to SJS staff.

70.4. FGCs should not be deleted unless created in error and only if there are no links to the FGC record. For control purposes, this function might be limited to SJS staff.

71. Force Elements. Force Elements in the context of FP&R are organizations that are assigned to FGCs. As such, these records only relate the portions of the Force Element dedicated at least part of the time to the FGC.

71.1. L1 staff should create a new Force Element using a form that will link the Force element to an existing FGC. The other data may be entered manually or imported from SAST. The resources and costs should be entered if possible based on quantitative data following discussions with L1 staff. The fields are specified as optional because there may be not be data in all cases.

71.2. L1 staff can create records between a single Force Element and multiple FGCs. Once the majority of records have been created, it will be possible to produce a report of Force Elements listing all the resource committed to all FGCs. Of course, if Dept Ids are used that only represent sections, then this report will be more difficult to produce unless the Dept Ids include the main Force Element in the Force Element Number. It will also be possible to produce a similar report of FGCs, the related Force Elements and all the resources assigned to each FGC.

71.3. Once created, L1 staff will be able to modify the Force Element records and would be able to change all data except the Force Element Number, which is the record key. They could

change the Force Element Name, the resources assigned, the location, and reports would automatically reflect the new situation.

71.4. As changes are made to Force Elements, there will be a need to track the history of changes to these records. Versions of these records could be kept at specific points in time, after specific types of changes, or when requested. This capability should be discussed between SJS and L1 staffs.

71.5. Force Element records should not be deleted unless created in error and only if there are no links to any FGC records. For control purposes, this function might be limited to SJS staff.

72. Concurrent Assignment of Force Elements to Multiple FGCs. In an ideal world, Force Elements could only be assigned to FGCs up to 100% of their resources, However, the capability or output of resources are often difficult to measure, therefore it is possible to multi-task people and organizations. Determining how concurrent assignment of Force Elements will be "measured" should probably initially be reported in order to see how many multiple Commitments each Force Element is assigned and they these situations could be analysed separately.

CFDS Force Posture and Readiness Assessment Status

The tables below together specify the FP&R Readiness Status. Table 11 specifies the data required for a report that lists the Mission, Task, and Commitment Details and other data from the CFDS Requirements table and also the FGC, Force Elements, and other data from the Force Element tables that have been related to the FGC. Table 12 specifies the Force Generational Capability Commitment Status and is equivalent to the View 3 in the current FP&R Collection Tool. Table 13 specifies the relationship of Table 12 to other tables and Table 14 specifies the Force Generator Assessment Status, which is equivalent to a cell in the View 1 in the current FP&R Collection Tool. Table 15 specifies the Commitment Details full In-Year Assessment when all the Force Generator Assessment Statuses are combined.

L1 Commanders' Comments

73. L1 Commanders' Comments are Limitations, Restraints, or general comments relating to Force Generation Capabilities, but these comments may be related to more than one FGC. From a database perspective, it is recommended that these comments be created separately and then linked to the FGC Assessments Status described below.

Table 10 – L1 Commanders' Comments

Field	Field Description	Mandatory or Optional	Data Entry	Comments
L1 Commanders' Note Identifier	A unique identifier for Commanders' Notes	M	Manual	N = RCN, L = CA, A = RCAF, etc. same as with current FP&R.
L1 Commanders Note	Commanders' Note that describes a Limitation or Restraint or other comment.	M	Manual	Example: PANAM GAMES 2015 - Scope to be clarified. Specifics as yet undefined. JTF Central lead.

74. In creating the FGC Commitment Status for a single Commitment Detail, the L1 staff is determining the status of the FGC for the Commitment based on the requirements of the Commitment and the resources of the FGC. Using the recommended database structure, a three step process is required to create an FGC Commitment Status. In step 1, the L1 staff will generate a report that will match the FGC and Force Element resources to the Commitment Detail to view the resources that have been allocated and are potentially available. This report will also list the related Mission, Task, and Commitment Detail information and the requirement information for Endurance, State of Readiness, and Responsiveness. In step 2, L1 staff will open a form that will create an FGC Commitment Status skeleton record without the assessment information. In Step 3 the L1 staff will compare the report to the skeleton record and complete the assessment by entering the missing data into the skeleton record. The recommended processes including the modify and other maintenance are explained in further detail below:

74.1. Create FGC Commitment Status. The following process will outline how the Commitment Status is created for an FCG.

74.1.1. To create the FGC Commitment Status, the L1 staff will request a report using a data entry form where they will enter the FGC, the Commitment Detail Identifier, and the Assessment Year. The form will generate a report that lists the Mission, Task, and Commitment Details, Endurance Requirement and other data from the CFDS Requirements table and also the FGC, Force Elements, Personnel Data, and other data from the Force Element tables that have been related to the FGC. The full listing of data to be provided in this report is listed in Table 11 below.

74.1.2. The L1 staff will then use another form and enter the same FGC, Commitment Detail Identifier, and Assessment Year used in the report generated above, and initiate a process to create a new record. Since the process will be creating a record from existing data, the FGC must be linked to Force Element data and the Commitment Detail Identifier and the associated data must already exist. A new skeleton record will be created with the FGC and the Commitment Detail Identifier as shown in Table 11 and the remaining data fields will be blank until the next step is complete.

74.1.3. Using the report from Table 11, L1 staff will then need to review the new record and manually populate the remaining mandatory fields in Table 11 and as many optional fields as possible. This is the important phase where L1 staff will consider the data on the report from

Table 11 to assess the requirements such as Endurance Required while also reviewing the FGC Personnel, Equipment and other data in order to record the assessment including the Commitment Status, Limitations and/or Restraints, Commanders' Notes, etc. Note that this information will be the actual status of the FGC not the requirements from the CFDS Requirements table. For example, the actual Limitations and Restraints can be entered, and also the actual Endurance, State of Readiness, and Responsiveness, which may be different from the CFDS Requirements table. During this process L1 staff may also link the FGC Commitment Status record to L1 Commanders' Comments. In addition, while considering the Personnel Data, Equipment Data and the other resource fields in the report, the L1 staff can assess and enter assessments in the Personnel Assessment and other resource assessment fields in the new record.

74.1.4. To create similar records for additional Assessment Years the process could be repeated or a copy option could be developed to create a new record from an existing record in a different year.

74.2. Modify. Subsequent to the initial creation of FGC Commitment Status records, to modify the FGC Commitment Status one or two of the steps would be required by L1 staff to update these records periodically.

74.2.1. Before beginning the modification, L1 staff should request the report specified at Table 11, which will provide a current listing of Commitment Details and FGC and Force Element data to assist in the assessment. If minor changes to the FGC Commitment Status, this report would not be required.

74.2.2. To modify the FGC Commitment Status, a modify form should be used where the FGC, a Commitment Detail Identifier, and an Assessment Year are entered and the existing record is presented for modification.

74.2.3. As changes are made to FGC Commitment Status records, there will be a need to track the history of changes to these records. Versions of these records could be kept at specific points in time, after specific types of changes, or when requested. This capability should be discussed between SJS and L1 staffs.

74.3. Archive. There needs to be the capability to archive FGC Commitment Status records periodically by SJS staff. As noted previously, it may also be desirable to archive a version of these records after all changes or after just certain changes. This requirement should be discussed between SJS and L1 staffs.

74.4. Delete. Records should normally be archived instead of deleted. However, there may be instances when records are created by accident and deletion of the record is appropriate. This capability should be limited to SJS staff.

74.5. L1 staff should have access to create or modify records in this table, but security should be designed so that L1 staff can only access tables related to their own Force Generator.

Table 11 – Report of Force Generational Capability Commitment Resources

Field	Field Description	Mandatory or Optional	Data Entry	Comments
Mission Number *record key #link to CFDS Requirements	Number of Mission	M	Populated by the report.	Data will be populated from the CFDS Requirements table
Mission Name data from Mission	Mission Name according to CFDS	M	Populated by the report.	Data will be populated from the CFDS Requirements table
Task Number *record key #link to Task	Task Number according to CFDS	M	Populated by the report.	Data will be populated from the CFDS Requirements table
Specific Task data from Task	Name of Specific Task	M	Populated by the report.	Data will be populated from the CFDS Requirements table
Task Description data from Task	Task Description according to CFDS	O	Populated by the report.	Data will be populated from the CFDS Requirements table
Commitment Detail Identifier *record key #link to Commitment Detail	A unique new Commitment Detail Identifier is required	M	**The Commitment Detail Identifier will be entered when the report is requested.**	Data will be populated from the CFDS Requirements table
Commitment Detail Name data from Task	Name of Commitment Detail	M	Populated by the report.	Data will be populated from the CFDS Requirements table
Commitment Detail Description data from Task	A longer description of the Commitment Detail could be added.	O	Populated by the report.	Data will be populated from the CFDS Requirements table

Field	Field Description	Mandatory or Optional	Data Entry	Comments
Force Generational Capabilities *record key #link to FGC	Which FGC is assigned to the task?	M	**The FGC will be entered when the report is requested.**	Data will be validated by the Force Generational Capabilities table
Force Generator	Force Generator to which the FGC is related	M	Populated by the report.	Data will be populated from the Force Generational Capabilities table
Assessment Year	Which year is being assessed	M	**The Assessment Year will be entered when the report is requested.**	*In-Year, In-Year Plus 1, In-Year Plus 2, In-Year Plus 3*
Force Element Number *record key	Force Element Number that is assigned to the FGC.	M	**Manual or import from SAST**	*Example: –12345* *Department ID or a lower organization level than a Force Element.*
Force Element Name	Name of Force Element	M	Populated by the report.	Data will be populated from the Force Element table.
Location	Location of the Force Element	M	Populated by the report.	Data will be populated from the Force Element table.
Endurance Requirement	Sustained and/or Surge capability	M	Populated by the report.	Example: Surge Data will be populated from the CFDS Requirements table.
Required State of Readiness	Required State of Readiness according to CFDS.	M	Populated by the report.	Executing Immediate Response Force High Readiness Normal Readiness Sustaining and Enabling Data will be populated from the CFDS Requirements table.

Field	Field Description	Mandatory or Optional	Data Entry	Comments
Required Responsiveness	Required Responsiveness according to CFDS	M	Populated by the report.	Notice to Move and/or ETA Main Force Data will be populated from the CFDS Requirements table.
Personnel Data	What numbers and composition of personnel are ready and assigned to the FGC?	O	Populated by the report.	Data will be populated from the Force Element table linked to the FGC. If there are multiple Force Elements related to the FGC, the data will be merged.
Equipment Data	What is Mission Essential Equipment are assigned to the FGC and what is their capability status?	O	Populated by the report.	Data will be populated from the Force Element table linked to the FGC. If there are multiple Force Elements related to the FGC, the data will be merged.
Ammunition Data	What ammunition is assigned to the FGC?	O	Populated by the report.	Data will be populated from the Force Element table linked to the FGC. If there are multiple Force Elements related to the FGC, the data will be merged.
Supplies Data	What is the status of repair parts and other supplies assigned to the FGC?	O	Populated by the report.	Data will be populated from the Force Element table linked to the FGC. If there are multiple Force Elements related to the FGC, the data will be merged.
Infrastructure Data	What is the status of the infrastructure used by the FGC?	O	Populated by the report.	Data will be populated from the Force Element table linked to the FGC. If there are multiple Force Elements related to the FGC, the data will be merged.

Field	Field Description	Mandatory or Optional	Data Entry	Comments
Costs Data	What costs are associated to this FGC?	O	Populated by the report.	Data will be populated from the Force Element table linked to the FGC. If there are multiple Force Elements related to the FGC, the data will be merged.
Report Date	Date that the report was generated	M	Generated by report.	This date will be generated and included in the report for reference purposes.

75. Note in Table 12 below that data such as the Mission, Tasks, Force Elements, and L1 Commanders' Notes are not explicitly listed. In a relational database, this data in not required in this record since it is recorded in the applicable source table. For example, the Commitment Detail Identifier is the record key for the CFDS Requirements table and it links to the Commitment Details and other data. Therefore, the Commitment Details text should not be recorded in this table because it will not be updated if the Commitment Details are modified in the source table. However, when reports are generated, the current related data will be extracted from their source table and reported in order to assist with the analysis or to report to management.

Table 12 - Force Generational Capability Commitment Status

Field	Field Description	Mandatory or Optional	Data Entry	Comments
Commitment Detail Identifier *record key #link to Commitment Detail	A unique new Commitment Detail Identifier is required	M	**The Commitment Detail Identifier will be entered during the create process**	Data will be populated from the Force Element table linked to the CFDS Requirements table
Force Generational Capabilities *record key #link to FGC	Which FGC is assigned to the task?	M	**The FGC will be entered during the create process**	Data will be validated by the Force Generational Capabilities table
Assessment Year	Which year is being assessed	M	**The Assessment Year will be entered during the create process**	*In-Year, In-Year Plus 1, In-Year Plus 2, In-Year Plus 3*

Field	Field Description	Mandatory or Optional	Data Entry	Comments
Commitment Status	What is the status of the FGC?	M	Manual	Status may be *Contributing*, *Executing*, or *Dedicated*
Limitations and/or Restraints	No Limitations or Restraints Limited Restrained	M	Manual	This field indicates if there is a Limitation, Restraint, or neither. Permitted values could be: *No* for no restraints and no limitations *Limited* *Restrained* *Limited* and *Restrained* for a limitation and a restraint.
L1 Commanders' Note Identifier #link to L1 Commanders' Comments	A unique identifier for Commanders' Notes	O	Manual	N = *RCN*, L = *CA*, A = *RCAF*, etc. same as with current FP&R. Mandatory if there is a Limitation and/or Restraint.
Endurance	What is the FGC Sustained and/or Surge capability	M	Manual	Example: Surge This data is not imported from the Commitment Detail table which is the Endurance Requirement. A deficiency should be explained by a L1 Commander's Note, but could be further explained here.

Field	Field Description	Mandatory or Optional	Data Entry	Comments
State of Readiness	Current State of Readiness as reported by L1s.	M	Manual	Options: *Executing* *Immediate Response Force* *High Readiness* *Normal Readiness* *Sustaining and Enabling* This data is not imported from the Commitment Detail table which is the State of Readiness Requirement. A deficiency should be explained by a L1 Commander's Note but could be further explained here.
Responsiveness	The current actual *Notice to Move* and/or *ETA Main Force* if applicable.	M	Manual	This Responsiveness may be different than what is required by the Mission/Task. This data is not imported from the Commitment Detail table which is the Response Requirement. A deficiency should be explained by a L1 Commander's Note but could be further explained here.
Personnel Assessment	What is the assessment of the readiness of personnel?	O	Manual	Initially, Personnel could be assessed as: Fully Ready – Red Minor Issues – Yellow Significant Issues – Red Additional comments could be provided.

Field	Field Description	Mandatory or Optional	Data Entry	Comments
Equipment Assessment	What is the assessment of the readiness of equipment?	O	Manual	Initially, Equipment could be assessed as: Fully Ready – Red Minor Issues – Yellow Significant Issues – Red Additional comments could be provided.
Ammunition Assessment	What is the assessment of the readiness of ammunition?	O	Manual	Initially, Ammunition could be assessed as: Fully Ready – Red Minor Issues – Yellow Significant Issues – Red Additional comments could be provided.
Supplies Assessment	What is the assessment of the readiness of supplies?	O	Manual	Initially, Supplies could be assessed as: Fully Ready – Red Minor Issues – Yellow Significant Issues – Red Additional comments could be provided.
Infrastructure Assessment	What is the assessment of the readiness of infrastructure?	O	Manual	Initially, Infrastructure could be assessed as: Fully Ready – Red Minor Issues – Yellow Significant Issues – Red Additional comments could be provided.
Cost Assessment	What costs are associated to this Force Element?	O	Manual	Ultimately, it is desirable that quantitative information be entered whenever possible. Initially, this will need to be decided between SJS and L1 staffs.

Field	Field Description	Mandatory or Optional	Data Entry	Comments
Record Date	Date that the record was last modified.	M	Updated when the record is changed.	This date will be updated by the database when the record is created or modified.

Report for Force Generational Capability Commitment Status

76. Given that the FGC Commitment Status would form the basis for the higher level statuses and it is at this level that the assessments are made, it is recommended that a report be developed for the FGC Commitment Status. The contents of this report could include all the data from the FGC Commitment Status records in addition to the data from the Report of FGC Commitment Resources so that the Commitment Status could be compared to the Commitment Resources. However, it may be desirable to reduce the amount of data reported, so a more detailed recommendation will not be made.

Relationships for Force Generational Capability Commitment Status and other Tables

77. The relationships described below illustrate how the Force Generational Capability Commitment Status table is related to the other tables. Note that this table is not related to Force Elements, but it is related to the Force Generational Capability table, which is related to Force Elements.

Table 13 - Relationships with Force Generational Capability Commitment Status table and other tables

Table 1	Table 2	Table 1 Related To Table 2 Data Element	Relationship from Table 1 to Table 2
FGC Commitment Status	CFDS Requirements	Commitment Detail Identifier	One-to-One
FGC Commitment Status	Force Generational Capabilities	Force Generational Capabilities	One-to-One

78. Force Generational Commitment Detail In-Year Assessment. To determine the "In Year Assessment" for each Commitment Detail for all FGCs in each assessment year for a single Force Generator, the L1 or SJS staff will need to generate a new record that will summarize the situation for all FGCs for the Force Generator. The new record will be equivalent to the View 3 In-Year Assessment for a Commitment and also equivalent to the View 1 Force Generator assessments except that there will be considerably more data if more data was entered in the FGC Commitment Status records.

78.1. Create FGC Commitment Detail In-Year Assessment. The following process will outline how the Commitment Detail In-Year Assessment is created for an FCG.

78.1.1. To create the new record, L1 or SJS staff would use a form and enter the Force Generator, Commitment Detail Identifier, and the Assessment Year.

78.1.2. The process will extract data from all the FGC Commitment Status records for the Force Generator and Assessment Year and also the Commitment Details from the related CFDS Requirements Table.

78.1.3. The process will then create a new record that will combine the assessments from the Force Generator's FGC Commitment Status records for the Commitment Detail and Assessment Year. For example, if one FGC Commitment Status record has an L1 Commanders' Note and another FGC Commitment Status record has a different L1 Commanders' Note, then both Notes would be recorded. Similarly, the Endurance, States of Readiness, Responsiveness, and Resource Assessments from all FGC Commitment Status records would be reported.

78.1.4. How the assessment data will be combined from the Commitment Status table for the FGCs that contribute to the reported Commitment Detail will have to be determined by SJS and L1 staffs.

78.1.5. To create similar records for additional Assessment Years the process could be repeated or a copy option could be developed to create a new record from an existing record in a different year.

78.2. Modify FGC Commitment Detail In-Year Assessment. To modify the FGC Commitment Detail In-Year Assessment, L1 or SJS staff would use a form and enter the Force Generator, Commitment Detail Identifier, and the Assessment Year. As changes are made to these records, there will be a need to track the history of changes to these records. Versions of these records could be kept at specific points in time, after specific types of changes, or when requested. This capability should be discussed between SJS and L1 staffs.

79. This capability should be available to both SJS and L1 staffs because while a new record may be created, essentially this process is creating a snapshot record of the required data, but it is not changing any of the source assessment data held in the FGC Commitment Status records. Access to these create and modify processes could be discussed between SJS and L1 staffs.

80. Table 14 below lists the data recommended for the new record. Note in Table 14 below that data such as the Mission, Tasks, Force Elements, and L1 Commanders' Notes are not explicitly listed. As for Table 12, this data in not required in this record because it is recorded in the applicable source table. However, when reports are generated, the current related data will be extracted from their source table and reported in order to assist with the analysis or to report to management.

Table 14 – Force Generator Commitment Detail In-Year Assessment

Field	Field Description	Mandatory or Optional	Data Entry	Comments
Commitment Detail Identifier *record key #link to Commitment Detail	A unique new Commitment Detail Identifier is required	M	**The Commitment Detail Identifier will be entered when the report is requested.**	Data will be populated from the CFDS Requirements table

Field	Field Description	Mandatory or Optional	Data Entry	Comments
Force Generator	Force Generator to which the FGC is related	M	**The Force Generator will be entered when the report is requested.**	Data will be populated from the Force Generational Capabilities table
Assessment Year	Which year is being assessed	M	**The Assessment Year will be entered when the report is requested.**	*In-Year, In-Year Plus 1, In-Year Plus 2, In-Year Plus 3*
Commitment Status	What is the status of the Force Element?	M	Populated by the report.	Status may be *Contributing*, *Executing*, or *Dedicated* Data will be populated from the combined FGC Commitment Status table records.
Limitations and/or Restraints	*No Limitations or Restraints* *Limited* *Restrained* *Limited and Restrained*	M	Populated by the report.	This field indicates if there is a Limitation, Restraint, or neither. Data will be populated from the combined FGC Commitment Status table records.
L1 Commanders' Note Identifier	A unique identifier for Commanders' Notes	O	Populated by the report.	*N = RCN, L = CA, A = RCAF*, etc. same as with current FP&R. Data will be populated from the combined FGC Commitment Status table records.
Endurance	What is the Force Generator Endurance capability	M	Populated by the report.	Example: *Surge* Data will be populated from the combined FGC Commitment Status table records.

Field	Field Description	Mandatory or Optional	Data Entry	Comments
State of Readiness	Current State of Readiness as reported by L1s.	M	Populated by the report.	Options: *Executing* *Immediate Response Force* *High Readiness* *Normal Readiness* *Sustaining* and *Enabling* Data will be populated from the combined FGC Commitment Status table records.
Responsiveness	The current actual Notice to Move and/or ETA Main Force if applicable.	M	Populated by the report.	This Responsiveness may be different than what is required by the Mission/Task. Data will be populated from the combined FGC Commitment Status table records.
Personnel Assessment	What is the assessment of the readiness of personnel?	O	Populated by the report.	Initially, Personnel could be assessed as: Fully Ready – Red Minor Issues – Yellow Significant Issues – Red Data will be populated from the combined FGC Commitment Status table records.
Equipment Assessment	What is the assessment of the readiness of equipment?	O	Populated by the report.	Initially, Equipment could be assessed as: Fully Ready – Red Minor Issues – Yellow Significant Issues – Red Data will be populated from the combined FGC Commitment Status table records.

Field	Field Description	Mandatory or Optional	Data Entry	Comments
Ammunition Assessment	What is the assessment of the readiness of ammunition?	O	Populated by the report.	Initially, Ammunition could be assessed as: Fully Ready – Red Minor Issues – Yellow Significant Issues – Red Data will be populated from the combined FGC Commitment Status table records.
Supplies Assessment	What is the assessment of the readiness of supplies?	O	Populated by the report.	Initially, Supplies could be assessed as: Fully Ready – Red Minor Issues – Yellow Significant Issues – Red Data will be populated from the combined FGC Commitment Status table records.
Infrastructure Assessment	What is the assessment of the readiness of infrastructure?	O	Populated by the report.	Initially, Infrastructure could be assessed as: Fully Ready – Red Minor Issues – Yellow Significant Issues – Red Data will be populated from the combined FGC Commitment Status table records.
Cost Assessment	What costs are associated to this Force Element?	O	Populated by the report.	Data will be populated from the combined FGC Commitment Status table records.
Record Date	Date that the record was last modified.	M	Updated when the record is changed.	This date will be updated by the database when the record is created or modified.

Report for Force Generator Commitment Detail In-Year Assessment

81. The Force Generator Commitment Detail In-Year Assessment is key information in the FP&R process, therefore it is also necessary to report on these details. The contents of this report could include all the data from the FGC Commitment Status and CFDS Requirements records and also the

data from the Report of FGC Commitment Resources so that the Commitment Status could be compared to the Commitment Resources. However, it may be desirable to reduce the amount of data reported, so a more detailed recommendation will not be made. This report request will dynamically generate a report based on the data at the time the report is requested and it may be desirable also to save the report data for future reference and to be available for export the report data to other systems.

82. CFDS Commitment Details In-Year Assessment. To determine the "In Year Assessment" for each Commitment Detail for all Force Generators in each assessment year, SJS staff will need to generate a new record that will summarize the assessment for all FGCs in all Force Generators. Table 15 below specifies the CFDS Commitment Details Assessment for a specific Commitment for all Force Generators for a specific Year, which is comparable to View 1 in the Current FP&R Collection Tool.

82.1. Create CFDS Commitment Details In-Year Assessment. The following process will outline how the CFS Commitment Detail In-Year Assessment is created for all Force Generators.

82.1.1. To create the new record, SJS staff would use a form and enter the Commitment Detail Identifier and the Assessment Year.

82.1.2. The process will extract data from all the FGC Commitment Status records for all Force Generators for the Assessment Year and also the Commitment Details from the related CFDS Requirements Table.

82.1.3. The process will then create a new record that will combine the assessments from all Force Generators FGC Commitment Status records for the Commitment Detail and Assessment Year. For example, if one FGC Commitment Status record has an L1 Commanders' Note and another FGC Commitment Status record with a different Force Generator has a different L1 Commanders' Note, then both Notes would be recorded. Similarly, the Endurance, States of Readiness, Responsiveness, and Resource Assessments from all FGC Commitment Status records would be reported.

82.1.4. How the assessment data will be combined from the Commitment Status table for the FGCs that contribute to the reported Commitment Detail will have to be determined by SJS and L1 staffs.

82.1.5. To create similar records for additional Assessment Years the process could be repeated or a copy option could be developed to create a new record from an existing record in a different year.

82.2. Modify CFDS Commitment Details In-Year Assessment. To modify the Force Generators Commitment Detail In-Year Assessment, SJS staff would use a form and enter the Commitment Detail Identifier and the Assessment Year. As changes are made to these records, there will be a need to track the history of changes to these records. Versions of these records could be kept at specific points in time, after specific types of changes, or when requested. This capability should be discussed between SJS and L1 staffs.

83. This capability should only be available to SJS staff because a new record is being created or an existing record is being modified. However, it is recommended that L1 staff have access to view the latest version of the report based on this table.

84. To determine the full CFDS Force Posture and Readiness for each Mission/Task/Commitment Detail for all Force Generators, a report or query will be generated that will summarize the status and will be equivalent of the View 1 in the current FP&R Collection Tool.

Table 15 - CFDS Commitment Details In-Year Assessment

Field	Field Description	Mandatory or Optional	Data Entry	Comments
Commitment Detail Identifier *record key #link to Commitment Detail	A unique new Commitment Detail Identifier is required	M	**The Commitment Detail Identifier will be entered when the report is requested.**	Data will be populated from the CFDS Requirements table
Assessment Year	Which year is being assessed	M	**The Assessment Year will be entered when the report is requested.**	*In-Year, In-Year Plus 1, In-Year Plus 2, In-Year Plus 3*
Commitment Status	What is the status of the Commitment Detail?	M	Populated by the report.	Status may be *Contributing*, *Executing*, or *Dedicated* Data will be populated from the combined FGC Commitment Status table records.
Limitations and/or Restraints	*No Limitations or Restraints* *Limited* *Restrained* *Limited and Restrained*	M	Populated by the report.	This field indicates if there is a Limitation, Restraint, or neither. Data will be populated from the combined FGC Commitment Status table records.
L1 Commanders' Note Identifier	A unique identifier for Commanders' Notes	O	Populated by the report.	*N = RCN, L = CA, A = RCAF*, etc. same as with current FP&R. Data will be populated from the combined FGC Commitment Status table records.

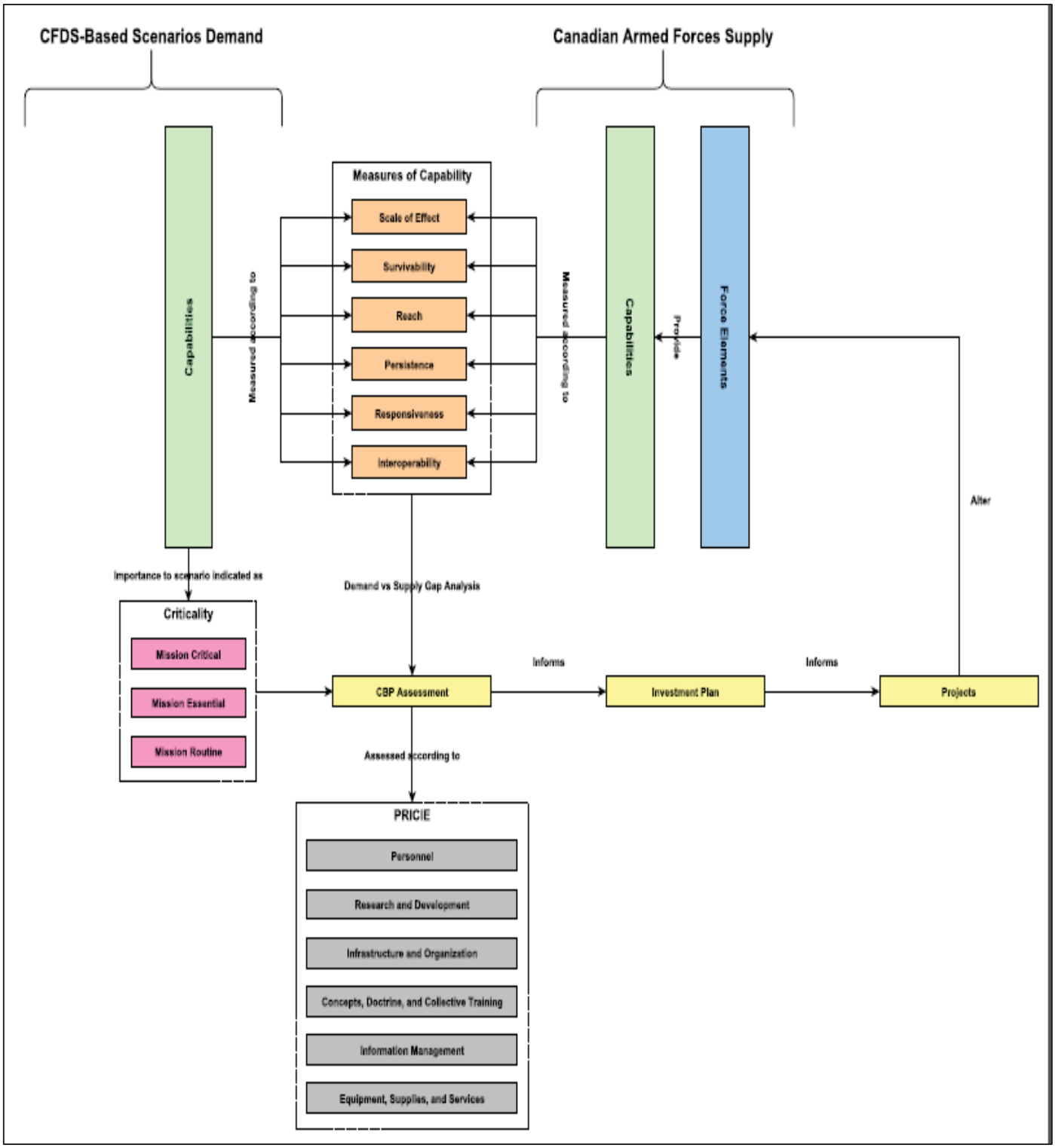
Field	Field Description	Mandatory or Optional	Data Entry	Comments
Endurance	What is the Force Generator Endurance capability	M	Populated by the report.	Example: *Surge* Data will be populated from the combined FGC Commitment Status table records.
State of Readiness	Current State of Readiness as reported by L1s.	M	Populated by the report.	Options: *Executing* *Immediate Response Force* *High Readiness* *Normal Readiness* *Sustaining* and *Enabling* Data will be populated from the combined FGC Commitment Status table records.
Responsiveness	The current actual Notice to Move and/or ETA Main Force if applicable.	M	Populated by the report.	This Responsiveness may be different than what is required by the Mission/Task. Data will be populated from the combined FGC Commitment Status table records.
Personnel Assessment	What is the assessment of the readiness of personnel?	O	Populated by the report.	Initially, Personnel could be assessed as: Fully Ready – Red Minor Issues – Yellow Significant Issues – Red Data will be populated from the combined FGC Commitment Status table records.

Field	Field Description	Mandatory or Optional	Data Entry	Comments
Equipment Assessment	What is the assessment of the readiness of equipment?	O	Populated by the report.	Initially, Equipment could be assessed as: Fully Ready – Red Minor Issues – Yellow Significant Issues – Red Data will be populated from the combined FGC Commitment Status table records.
Ammunition Assessment	What is the assessment of the readiness of ammunition?	O	Populated by the report.	Initially, Ammunition could be assessed as: Fully Ready – Red Minor Issues – Yellow Significant Issues – Red Data will be populated from the combined FGC Commitment Status table records.
Supplies Assessment	What is the assessment of the readiness of supplies?	O	Populated by the report.	Initially, Supplies could be assessed as: Fully Ready – Red Minor Issues – Yellow Significant Issues – Red Data will be populated from the combined FGC Commitment Status table records.
Infrastructure Assessment	What is the assessment of the readiness of infrastructure?	O	Populated by the report.	Initially, Infrastructure could be assessed as: Fully Ready – Red Minor Issues – Yellow Significant Issues – Red Data will be populated from the combined FGC Commitment Status table records.

Field	Field Description	Mandatory or Optional	Data Entry	Comments
Cost Assessment	What costs are associated to this Force Element?	O	Populated by the report.	Data will be populated from the combined FGC Commitment Status table records.
Record Date	Date that the record was last modified.	M	Updated when the record is changed.	This date will be updated by the database when the record is created or modified.

Annex C

Capability Based Planning Process Schematic



Annex D

Capability Base Planning Compared to Force Posture & Readiness Data

Table 16 - Capability Base Planning Compared to Force Posture & Readiness Data

FP&R Data			CBP Data
Field	**Field Description**	**Comments**	
CFDS Mission Number	Mission # according to CFDS	Example: 1	Scenarios
CFDS Mission	Mission Name according to CFDS	Example: Conduct Daily Domestic and Continental Operations, including in the Arctic and through NORAD.	10 scenarios based on the six CFDS missions and three roles.
Specific Task	Name of Specific Task	Example: Daily Domestic Operations	Stakeholders have identified 504 capabilities of interest of which 93 (TBC) will be scored. This is what is described as the DEMAND within the CBP Process.
Task Number	Number of Specific Task	Example: 1b – This number only relates to the Task Statement which may be removed at some point.	NOT USED
Task Statement	Task Statements from the CFDS	This is the Task Statement associated to the Task Number	NOT USED
Commitment Detail	Name of Sub-Task	Example: National Daily Domestic Operations	NOT USED
Endurance	Indicates the task requirement for a Sustained and/or Surge FGC commitment.	Example: Surge	The seven Measures of Capability (MoC) have been developed to try to quantify what the supply and demand are. The seven MoCs are: Scare of Effect, Survivability, Reach, Persistence, Responsiveness, and Interoperability. Persistence is comparable to Endurance

FP&R Data			CBP Data
Field	**Field Description**	**Comments**	
Readiness State	Indicates the task requirement for an IRF, HR, or NR, FGC commitment.	Example: IRF and NR	
Response	Indicates the requirement for the FGC Notice to Move and/or ETA Main Force.	This requirement is specified when necessary.	RESPONSIVENESS
Force Generating Capability	Capability as defined by the Force Generator	Example: Ready Duty Ship - Pacific	Within CBP, the term "*capability"* refers to an action or requirement to complete a task. An object that delivers or provides the capability is referred to as "FORCE ELEMENT" Canadian Surface Combatant (CSC)
Force Generator	Force Generator to which the Capability is related	Example: Royal Canadian Navy	Parent Force Generator Royal Canadian Navy
Location	Location of the FCG	Example: Esquimalt BC The location is not specified in the FP&R but is implied.	Although the location of the Force Element is not specifically identified, by mapping the Force Elements to the Department IDs supplying the Force Elements and using the organizational data within HRMS, the location of the assets is available.